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DIMENSIONS OF JUVENILE DELINQUENCY AND THEIR RELATIONSHIP
TO SENSATION SEEKING, SELF-REPORTED OFFENSES, AND
FRUSTRATION

By

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This study examines the effects of delinquent personality dimensions and sensation seeking on self-reported delinquent behavior in a sample of high school students. Three major personality dimensions have been delineated within the delinquent population; however, very little research has been conducted to assess the influence these personality dimensions may have on delinquent behavior. Sensation seeking has been proposed as a motivator for various stimulating or risk-taking behaviors, one of which is delinquent behavior. The individual effects and interaction of sensation seeking and delinquent personality dimensions on self-reported delinquent behavior

were examined.

The data revealed a strong relationship between sensation seeking and self-reported delinquent behavior.

Analysis showed that specific types of delinquent behavior were significantly related to the interaction of delinquent personality dimensions and gender. These findings were discussed in relation to previous reseach, implications for future study and possible preventative measures aimed at reducing delinquent behavior.

CHAPTER 1 INTRODUCTION

Overview of Delinquency

Juvenile delinquency is a legal term referring to a person, under 18 years of age, who has committed a crime or engaged in other illegal behavior not specified in the criminal code which may potentially involve the individual in the juvenile justice system. Delinquent behaviors can range from status offenses that are illegal due to the age of the offender (i.e. truancy, running away) to index offenses which are illegal regardless of the age of the offender (i.e. disorderly conduct, assault, burglary, murder). Juvenile delinquency did not exist as a legal entity until 1899, when the United States initiated special juvenile courts to deal with young people who committed crimes. Juvenile courts were heralded as a major social advance where the welfare of the child became as important as the crime committed (Stumphauzer, 1985).

Delinquency is quite common in America. Research has shown that close to 90% of adolescents have engaged in some type of delinquent behavior (Williams & Gold, 1972; Elliott, Huizinga, & Ageton, 1985). In 1984, there were more than 2 million arrests of persons under 18 years of age (FBI, 1985). This figure is viewed as an underestimate, because it is based only on reported crimes. Arrest rates tend to

increase with age, reaching a peak at 17 years for males, and 16 for females (FBI, 1984). There has also been an increase throughout the world in serious and violent crimes by juveniles, such as armed robbery, murder, and rape (Stumphauzer, 1981). These statistics suggest that delinquency is one of the major problems facing the behavioral sciences.

Theories of Delinquency

There have been many attempts to explain delinquent behavior from different perspectives. Several of the major theories include sociological, psychological, and biological. Sociological theories of delinquency view the behavior as a function of a complex interaction of variables within the individual's environment, over which he or she may or may not have control. These variables include sex, race, socioeconomic status (SES), geographic region, family characteristics, job opportunities, and subcultural norms and values. Three of the major sociological theories will be discussed.

Merton (1938) has developed what has been referred to as anomic or strain theory, which has been elaborated on by Cohen (1955) in the form of status deprivation, and Cloward and Ohlin (1960) in the form of differential opportunity. According to strain theory, success is prized by all Americans, but opportunities for success by legitimate means are not distributed equally among the social classes. Adolescents feel pressure for deviant behavior when they

experience marked discrepancies between aspirations and opportunities for achievement (Cloward and Ohlin, 1960). This discrepancy or "strain" is primarily produced in lower class youths who have conventional success goals, but due to their social class have limited opportunities to achieve these goals. This strain may produce lowered self-worth, increased frustration, alienation, and ambivalence. It may also produce attempts toward advancement through illegitimate means, resulting in delinquent behavior and often involvement in the juvenile justice system. This theory was the motivating force behind several government programs in the 1960's to help provide job opportunities, better education, and community programs for juveniles of lower income families. However, strain theory lacks empirical support for several of its major premises and has been criticized as being excessively complex in its attempt to account for too much (Empey, 1982).

Another sociological theory of delinquency is the Social Bonding theory proposed by Hirschi (1969). He asserts that it is only the individual's bond to society that deters antisocial behavior. The strength of this social bond determines the person's degree of conformity. This social bond is achieved through attachment, commitment, involvement, and belief. Attachment is the tie of affection and respect between children and significant others, such as parents, teachers, and friends. Commitment is the extent to which children dedicate themselves to conventional lines of

action for fear of the consequences of deviant behavior. Involvement is the degree to which a person participates in conventional activities. Belief is the degree that individuals accept the morality of the law and conventional values. Hirschi believes that these four factors are the bases for conformity and that the lack of control from these bonds is a major contributor to delinquent behavior. He places much importance on the family in the development of attachment, commitment, involvement, and belief.

Akers (1977) proposed a Social Learning theory of deviant behavior, which has its origins in operant conditioning research. He states that social behavior is learned through operant conditioning, in which behavior is shaped by its consequences. Behavior is strengthened by reinforcement (presentation of positive stimuli or removal of aversive stimuli) and weakened by punishment (presentation of aversive stimuli or removal of positive stimuli). The occurrence of deviant or conforming behavior is dependent on the person's history of reinforcement and punishment for the behavior and the reinforcement and punishment associated with alternative behaviors (differential reinforcement). He proposed that deviant behavior will increase when there is greater exposure to delinquent rather than nondelinquent models (imitation), when delinquent behavior is differentially reinforced, when there is more association with delinquent peers (differential association), and when delinquent behavior is

framed in more positive than negative terms. This theory has received empirical support for explaining drug abuse (Krohn, Lanza-Kaduce, & Akers, 1984; Lanza-Kaduce, Akers, Krohn & Radosevich, 1984) and aggressive behavior (Neopolitan, 1981).

Some sociological theories have resulted in changes in social policy and have led to the development of new programs to address those areas viewed as being major contributors to delinquency. The data on the application of these programs to the problem of delinquency have resulted in modest impact on the rates of delinquency (Empey, 1982). One reason for the modest success rates in prevention and treatment of delinquency may be the assumption of homogeneity of the delinquent personality espoused by most of these theories. Closer scrutiny of the delinquent population may reveal that certain sociological theories are more applicable to some types of delinquents than others.

The fact that some children from the same environment engage in delinquent behavior, while others do not, suggests that more than just broad social factors are involved. In the development of delinquent behavior, psychological variables have often been posited as influential. The major psychological theories of delinquency are analytical, operant, and familial.

One of the earliest psychological theories of delinquency was based on Freud's work. Friedlander (1947) stressed that the delinquent functions according to the

pleasure principle and cannot tolerate frustration or delay gratification. Delinquents have an ineffective superego, due to inadequate care during infancy, which makes them unable to inhibit their pleasure-seeking tendencies.

Another analytically oriented theory has been proposed by Stot (1980). He proposed that growing children have two basic needs: self realization; and care, affection, and devotion from an adult. Dissatisfaction of either need leads to discomfort and efforts to resolve this frustration. If the frustration is not resolved, anxiety mounts, leading to the activation of an emergency reaction system. This system activates feelings of resentment and delinquent behavior, such as retaliation, "avoidance excitement" and "inferiority compensation."

The application of operant theory to delinquent behavior has been elaborated on above (Akers, 1977), but has clear implications for psychological learning processes.

Patterson (1982) theorizes that delinquent behavior is primarily due to a dysfunctional family process. Through a lack of discipline, the juvenile fails to learn to discriminate between criminal and noncriminal behavior. Parents contribute to the development of delinquent behavior by failing to label, track, and provide consequences consistently for this behavior. Parents reinforce delinquent behavior by modeling coercive ways of interacting, which results in deficient social skills.

This lack of social skills results in difficulties at school and at work, which may predispose juveniles to interpersonal problems throughout their life.

Various biological explanations for delinquent behavior have also been proposed. Mowrer (1960) suggests that some children's responsiveness to external stimulation is impaired, which leads to difficulty making associations between behavior and punishment. Therefore, these children experience problems inhibiting behavior that may elicit punishment and fail to learn the consequences of their behavior.

Various sociological and psychological theories cite strain, social bonding, or failure to learn consequences as factors involved in etiology of delinquency. One common characteristic shared by these factors is their production of or increase in frustration.

The Role of Frustration

Many delinquent behaviors may be in response to academic failure, blocked vocational opportunities, or feelings of entrapment in an aversive situation, which many juveniles find very frustrating. Frustration may result in aggressive acts. Strain theorists have attempted to address this issue at the sociological level, but firm empirical support is lacking. One of the most influential psychological theories of aggression is the Frustration-Aggression Hypothesis (Dollard, Doob, Miller, Mower, & Sears, 1939). According to this theory frustration always

leads to some form of aggression, and the occurrence of aggressive behavior always presupposes the presence of frustration. Frustration results from interference in attaining some anticipated goal. Aggression is defined as a behavior, the goal of which is the injury of a person. According to this theory, various factors influence the occurrence of aggression: the amount of frustration, effects of punishment, displacement of aggression, and the catharsis of aggression. Aggression will be directed at the source of frustration, unless the aggression is inhibited (via punishment), which will produce more frustration. This vicious circle of frustration-blocked aggression-frustration continues and increases the probability that the person will exhibit other acts of aggression not directed at the frustrating object (displaced aggression). Attempts to create experimentally different levels of frustration and look for corresponding differences in aggression has provided only limited support for the theory (Williams & Geison, 1979). However, it has been found that the same individual maintains the same tendency to experience frustration in a variety of settings (Schachter, 1964; Lamb, 1978). Although most workers in the area would argue with the view that frustration "always" results in aggressive behavior, it would seem that experiencing frustration may contribute to crimes against persons or objects which are unprovoked and are attributed to the pathology of the delinquent, rather than their situation.

Megargee (1966) distinguished between "undercontrolled" delinquents, who are habitually aggressive, and "overcontrolled" delinquents, who commit violent crimes, yet have no prior criminal history. The undercontrolled type are impulsive and respond to frustration with aggression and are labeled psychopaths. The overcontrolled type rarely respond with aggression due to strong inhibitions; only after a long build up of frustrations will they exhibit aggressive behavior.

While these broad-based theories have advanced our thinking about delinquency, they are limited in their view of the delinquent personality as a unitary concept. Interestingly, in light of the varied behavior that can bring a delinquent into the juvenile justice system, these delinquents may be highly variable in their attitudes and behavior.

Dimensions of Delinquent Personalities

The majority of delinquency researchers have viewed delinquency as a unitary concept and have focused simply on examining differences between delinquent and non-delinquent samples (Quay, 1987); however, data suggest that the delinquent population is a very heterogeneous group. This notion has been supported by research initially conducted by Hewitt and Jenkins (1946) and later in a widely cited study by Quay (1964). Evidence from multivariate studies suggests that juvenile delinquents can be reliably classified into at least three major personality types: neurotic/disturbed

(ND), unsocialized-psychopath (PD), and socialized-subcultural (SD) (Quay, 1964). The ND is viewed as hypersensitive, with feelings of inferiority and depression, having poor social skills, at times impulsive and aggressive, but experiences tension and guilt over misbehaviors. The PD is viewed as manipulative, defiant, guiltless, amoral, rebellious, egocentric, distrustful of authority, impulsive and without loyalties. The SD is likely to come from lower SES, be a loyal member of a gang, and cooperate with the gang in crime. The SD has no motivation to change his behavior, except to avoid arrests. In addition to Hewitt & Jenkins (1946) and Quay (1964), other studies have attested to the reliable identification of these dimensions in children and adolescents (Behar & Stringfield, 1974; Conners, 1969; Kohn & Rosman, 1972; Victor & Halverson, 1976).

In addition to differences identified through multivariate research, other differences have been found among the delinquent personality groups. Ellis (1982) found that ND were less empathic than PD, who were less empathic than SD. The ND scores correlated negatively with all the adjustment scales of the California Personality Inventory (Quay & Peterson, 1964). In a study measuring the three dimensions, scores on the SD and ND scales were not related to intelligence, but the PD scores were negatively related to achievement and intelligence, which is consistent with the findings obtained with adult psychopaths. The PD scale

correlated negatively with Responsibility, Communality, and Achievement via Independence scales of the California Personality Inventory, which is consistent with the view that PD do not see themselves as lacking poise, or self-control and do not seek to make a good impression.

Individuals classified as psychopathic delinquents have been found to be more immature in their moral development and role taking abilities as well as more concrete in their reasoning than ND or SD (Jurkovic & Prentice, 1977).

The SD scores correlated negatively with Well Being, Tolerance, Intellectual Efficiency, and Psychological Mindedness suggesting that rigidity, and conformity are characteristics of the high SD scorer (Quay & Peterson, 1964). Genshaft (1980) found the Minnesota Multiphasic Personality Inventory (MMPI) profiles of ND, PD, and SD delinquents revealed two personality types: a weak ego delinquent with considerable intrapsychic conflict (ND) and a more traditional psychopathic delinquent with little apparent anxiety or neurotic symptoms (PD).

Although learning deficits have been found in undifferentiated samples of delinquents (Zinkus & Gottlieb, 1977; Jerse & Fakouri, 1978; Lane, 1980), only recently has it been found that learning problems correlated with the PD scale of the Personal Opinion Survey, but not the SD or ND scales (Jefferson & Johnson, 1989). These learning problems may be due to a wide variety of reasons within the

individual's personality or a function of the their behavior. These may include: missed opportunities caused by disciplinary actions, disinterest resulting from insufficient stimulation from the academic material, or learning disabilities. Physiological evidence also supports the existence of delinquent groups. Borkovec (1970) found that psychopathic delinquents had lower initial reactivity to a tone stimulus than neurotic delinquents. Others have reported lower electrodermal reactivity in conduct disordered children and antisocial adolescents (Raine & Venables, 1984; Delameter & Lahey, 1983). Hare (1968) found that adult psychopaths had lower resting levels of electrodermal responding and less autonomic responses to tones than neurotic psychopaths and nonpsychopath inmates. Psychopaths have also been found to be less responsive to aversive stimuli than nonpsychopathic offenders (Hare, Frazelle, & Cox, 1978; Hare & Craigen, 1974). These findings suggest that psychopaths may require a stronger stimulus to evoke a response, and they may respond differently to punishment than non-psychopathic offenders.

Stimulation Seeking and Its relevance to Delinquency

The physiological data on psychopathic delinquents is consistent with the notion of the pathological stimulation seeker proposed by Quay (1965). Quay theorized that the psychopath has either an increased rate of adaptation or a lessened basal reactivity causing a condition of stimulus deprivation which the psychopath finds affectively

unpleasant. The psychopath seeks to change this affective state by seeking stimulation. In this highly routinized modern world, the need to change the level of stimulation may be achieved either by changing the intensity of the stimulation or the variability of stimulation sources, such as listening to loud music, driving at high speeds, or sky diving. Zuckerman (1979) defines sensation seeking as "the need for varied, novel, and complex sensations and experiences and the willingness to take physical and social risks for the sake of such experiences" (p. 34).

Zuckerman, Kolin, Price & Zoob (1964) developed the Sensation Seeking Scale (SSS), to measure individual differences in sensation seeking. Various psychological measures have been correlated with stimulation seeking. A positive correlation has been found between high stimulation seeking and the Mania and the Psychopathic Deviant scales of the MMPI, the Extraversion scale (Zuckerman, Bone, Neary, Mangelsdorff, & Brustman, 1972; Zuckerman & Link, 1968), and Psychoticism scale of the Eysenck Personality Inventory (Eysenck & Zuckerman, 1978). The Experience Seeking and Disinhibition scales of the SSS correlated with the frequency of situations in which emotions were expressed and the intensity of the emotions expressed (Allen, 1976). No correlation has been found between stimulation seeking and anxiety (Zuckerman, Schultz, & Hopkins, 1967; Zuckerman & Link, 1968; Kilpatrick, Sutker & Smith, 1976). Stimulation seeking appears to be related to impulsivity, particularly,

the readiness to engage in activities which are physically risky (Zuckerman, 1979). Zuckerman, Kolin, Price and Zoob (1964) found a negative correlation with anxiety and a positive correlation with scores on the Embedded Figures Test. This suggested that the SSS is not a measure of impulsivity, but of sensitivity to internal sensations.

Physiological evidence suggest that high stimulation seekers are markedly different from low stimulation seekers biochemically and neurophysiologically. Larger initial skin conductance levels have been found in high stimulation seekers than in low stimulation seekers under various types of stimulation, such as the presentation of neutral (e.g. landscape, clock) or loaded (e.g. boxing, mountain climbing) slides (Smith, Perlstein, Davidson & Michael, 1986). High stimulation seekers show a greater orienting reflex to novel stimuli than low stimulation seekers (Neary & Zuckerman, 1976). Daitzman and Zuckerman (1980) found that subjects scoring high on the Disinhibition scale had significantly higher levels of testosterone, 17-B estradiol, and estrone than low scorers on the Disinhibition scale. Higher testosterone levels have been found in inmates with a history of aggressive or violent tendencies (Rada, Laws & Kellner, 1976; Ehrenkranz, Bliss & Sheard, 1974).

Zuckerman (1979) reviewed the physiological data related to stimulation seeking and replaced his theory of an optimal level of arousal mediated by the reticulo-cortical activating system, with a theory concentrating on the limbic

reward system. He accepts Stein's (1978) theory that dopamine pathways provide the general approach incentive, and norepinephrine pathways control the expectancies of positive reinforcement from the stimuli. High levels of dopamine result in more activity and the increased exploration of new situations, and high norepinephrine is related to the expectation for positive reinforcement from persons or situations, which would be part of the motivation for risk taking behavior. SSS scores have been found to be negatively correlated with plasma monoamine oxidase levels (Murphy, Belmaker, Buchsbaum, Martin, Ciaranello & Wyatt, 1977; Schooler, Zahn, Murphy & Buchsbaum, 1978). Monoamine oxidase (MAO) is the primary catalyst for breaking down monoaminergic neurotransmitters (dopamine, norepinephrine, and serotonin) and high MAO levels have been shown to be related to depressive symptoms (Cotman & McGaugh, 1980).

The high levels of activity in these reward centers result in a special alertness and responsiveness to novel stimulation that can be related to stimulation seeking. However, subsequent research has revealed that metabolites of dopamine measured in the cerebrospinal fluid were not related to stimulation seeking, but norepinephrine metabolites in the CSF did correlate negatively with stimulation seeking (Zuckerman, 1983). The relationship between norepinephrine and stimulation seeking has more recently been investigated with the primary focus on the locus coeruleus, which contains 70% of the norepinephrine in

the brain (Zuckerman & Como, 1983). It has been found that when electrodes were implanted in the locus coeruleus of rats, novel stimulation produced habituation and dishabituation similar to the responses found when measuring the orienting response in humans (Aston-Jones & Bloom, 1981). This suggests that the norepinephrine system may constitute another arousal system (Routtenberg, 1968). The intrinsic reward or punishment may be related to the level of arousal, with high arousal related to anxiety and moderate arousal related to reward. This results in a return to the optimal level of stimulation theory first proposed, but with a specific biological system as its basis. It may be that the high stimulation seekers have a lower arousability in the norepinephrine system, which may be the reason some high sensation seekers use drugs or experiences that increase norepinephrine activity (Zuckerman & Como, 1983).

It is noteworthy that these physiological findings with stimulation seekers are very similar to those found with psychopathic delinquents. It may be that the sensation seeker will engage in behaviors that will result in a relative increase in internal arousal such as high speed driving, attending rock concerts, and sky diving, but if these appropriate types of behavior are not available, they may find inappropriate ways to increase their arousal, such as truancy, fighting, using certain types of drugs, or stealing.

The research on the relationship between sensation seeking and delinquency has yielded some interesting results. Male and female felons and delinquents have been found to score higher on the SSS than psychiatric patients (Thorne, 1971) and nondelinquent high school students (Farley & Sewell, 1976). White, Labouvie, and Bates (1985) found that delinquent adolescents scored significantly higher on the disinhibition scale of the SSS than nondelinquent adolescents. Farley and Farley (1972) found that in 27 delinquent females, the ones scoring high on the SSS exhibited more fighting, escape attempts, and were punished more often for disobeying their supervisors than those scoring low on the scale. This finding suggests that there may be a link between stimulation seeking and aggressive behavior. However, these studies address the delinquent personality as a unitary concept, which is contrary to the data presented above (see, Quay, 1987).

In contrast to these studies employing paper and pencil measures of stimulation seeking, laboratory research on stimulation and novelty seeking among the delinquent personality groups has been successful in delineating the theorized differences related to personality dimensions of delinquency. Skrzypek (1969) supported Quay's theory in finding that PD had lower pretest anxiety, and higher novelty and complexity preference scores than ND. Orris (1969) found that PD had a severe vigilance decrement when compared to SD and ND. Unsocialized-psychopaths (PD) have

been found to have a higher level of stimulation seeking than ND and normal children, as measured by decreased viewing time of a monotonous sequence of photographic slides (Whitehill, Demeyer-Gapin, & Scott, 1976). However, these subjects were classified by subjective ratings and these delinquent groups may be somewhat different than those groups classified by Quay and Parsons (1971). These studies suggest that stimulation seeking may play a significant role in the psychological makeup of some delinquents, especially the psychopathic delinquent.

The relationship between stimulation seeking and aggression has received limited attention. Studying undergraduates, Zuckerman (1974) found the Disinhibition scale, for males and females, and the General, Disinhibition, and Experience Seeking scales for females, correlated positively with the aggression scale on the Personality Research Form. This positive relationship has also been found for the Experience Seeking and Disinhibition scales in a VA psychiatric sample (Daitzman & Tumilty, 1974). High school students who scored high on the SSS tended to engage in misbehavior at school more often than low scorers on the SSS (Wasson, 1980). The biological substrate for aggression is thought to rest primarily in the limbic system, which is in the same region proposed as the substrate for stimulation seeking.

Frustration may also play a significant role in the behavior of the psychopathic delinquent. This group of

delinquents may become more frustrated given that they have more learning difficulties, and have greater problems in social situations, and because their attempts at stimulation seeking may be blocked. These situations taken together place the delinquent at risk for aggressive behavior, resulting in difficulties at school, both academically and socially.

Given the diversity within the delinquent population, it is likely that individual delinquents have different motivations behind their behavior and respond to situations differently. For example, psychopathic delinquents may have higher sensation-seeking needs than other delinquents and this may result in more frustration if these needs are not met. Their sensation seeking needs along with a heightened level of frustration may put them at risk for more aggressive and delinquent behavior. While not motivated by sensation seeking needs, the neurotic delinquents may attempt to overcompensate for perceived inadequacies by engaging in delinquent behavior. Neurotic delinquents may experience just as much frustration, but its origin may relate to these feelings of inadequacy. The sensation seeking needs of socialized delinquents, although not as great as psychopathic delinquents, may be met through interactions with their peer group. Frustration experienced by these delinquents may be minimized by their group's support and behavior. The three delinquent dimensions may have a very different relationship with sensation seeking

and frustration. In general, this study attempts to examine such relationships among dimensions of delinquency, sensation seeking, and frustration such as those hypothesized here and how these relationships relate to different types of delinquent behavior.

Nature of the Present Study

This study attempted to overcome one of the major shortcomings of prior delinquency research by considering differences among the three delinquent subgroups, i.e. neurotic delinquent, socialized delinquent, and psychopathic delinquent. A major goal of the present study was to examine how the type and frequency of self-reported delinquent behavior varied among high school students as a function of delinquency personality type. In addition, differences between high and low sensation seekers were assessed so as to evaluate the relationship between sensation seeking and self-reported delinquency. Also of interest was how the combination of these two variables (delinquent type and sensation seeking status) might relate to the dependent measures. The resulting six groups were the major focus of the study: High Sensation Seeking (SS) Neurotic delinquent, High SS Socialized delinquent, High SS Psychopathic delinquent, Low SS Neurotic delinquent, Low SS Socialized delinquent, Low SS Psychopathic delinquent. In terms of the interaction of sensation seeking and delinquency group, it was predicted that high stimulation seekers in the PD group would be found to have engaged in

more predatory crimes (e.g. assault, burglary, and auto theft) and public disorder crimes (e.g. disorderly conduct, drunkenness, and obscene phone calls) than subjects in the low stimulation seeking PD group and the other four groups. It was assumed that these differences relate to the heightened frustration, resulting from unsatisfied stimulation needs, as well as the learning problems experienced by subjects in the psychopathic delinquent group.

A second goal of the study was to examine the role of frustration in delinquent groups and stimulation seekers, especially in regard to aggressive behavior. Given the assertions of strain theory and the frustration-aggression hypothesis, a higher level of frustration should be related to a higher frequency of aggressive behavior. The proposed relationship between the PD and the high stimulation seeker suggest that this group would score higher on a measure of frustration if their stimulation needs are blocked, if they are experiencing academic problems and if their social interactions are ineffective. It was predicted that the PD group would experience more frustration than the ND group, who would experience more than the SD group.

The study also sought to examine other presumed correlates of delinquent group membership and stimulation seeking. Variables considered here included school grades, school behavior, sports, self-reported arrests, and classes taken. It was hypothesized that the high stimulation

seeking PD subjects would exhibit relatively poorer academic performance than the ND or SD subjects. Because the research with sensation seekers concerning academic performance is equivocal (Anderson, 1973; Kish & Busse, 1968), this relationship was also be examined. This study sought to replicate earlier findings that high stimulation seekers engage in more misbehavior at school (Wasson, 1980). Information concerning the subjects' favorite classes and sports participation was obtained to determine if high stimulation seekers participate in more stimulating and risky activities and sports than low stimulation seekers. The students who participate in these sports or activities should report a lower frequency of delinquent behavior, given that either their need for stimulation is fulfilled and/or they may have less time to engage in delinquent activities.

The relationship of socioeconomic status, sex, and race to self-reported delinquent behavior was assessed by inclusion of these variable in regression analyses or by chi-square analysis. Official records of delinquency show a disproportionate amount of crime is committed by members of the lower social classes and blacks (Elliot & Ageton, 1980; Brownfield, 1986). The occupation and education of the parents was also examined among the six groups.

Given the use of multiple self-report measures, a social desirability scale was given to measure and control for the subjects' desire "to put up a good front." This

tendency may indicate self deception, a lack of insight into one's own character or an unwillingness to accept one's limitations (Anastasia, 1976). These scores were used in the data analysis to help control for the variability this tendency may contribute to the subjects responses.

CHAPTER 2 METHOD

Subjects

The sample consisted of 140 high school students, of which 57 (41%) were male and 83 (59%) were female. The sample was predominantly white (94%). The ages of the subjects ranged from 14 to 19 years, with a mean of 16 years, 8 months. The median family income of the sample was in the \$30,000 to \$50,000 range.

Measures

A Student Demographic Questionnaire provided information on age, race, GPA, hobbies, favorite class, participation in sports, focus of current difficulties, frequency of disciplinary actions at school, criminal history, and counseling history.

A Parent Questionnaire provided information on occupation of the mother and father, their age, their education, number of persons in the home, number of siblings, income range, and history of diagnosis and medication for hyperactivity.

The subjects were administered the Personal Opinion Survey (POS) (Quay & Parsons, 1971) to classify them into the delinquent personality dimensions. The POS is a 100 item,

true-false questionnaire. The POS was developed from a series of factor analytic studies of the responses of both institutionalized delinquents and public school students to a large pool of items tapping attitudes, beliefs, feelings, and behaviors (Peterson, Quay, & Cameron, 1959; Peterson, Quay, & Tiffany, 1961; Quay, Peterson & Consalvi, 1960). The POS yields scores on three personality dimensions: Neurotic Delinquent, Socialized Delinquent, and Psychopathic Delinquent. Test-retest reliability for the three scales using 65 institutionalized delinquents over an interval of 90 days yielded a stability coefficient of .76 for Neurotic Delinquency, .75 for Psychopathic Delinquency, and .61 for Socialized Delinquency. The three factors of the POS have adequate discriminant validity as suggested by significant group differences on the Neuroticism and Well Being scales of the California Personality Inventory, intellectual and achievement measures, and cross validation with new samples (Quay and Parsons, 1971). The POS has also been used in research to differentiate groups of delinquents (Hundleby & Ross, 1977; Genshaft, 1980; Raine & Venables, 1981; Ellis, 1982; Raine, Roger, & Venables, 1982; Jefferson & Johnson, 1989).

Each subject completed the Sensation Seeking Scale - Form V (SSS) (Zuckerman, 1979) which consists of 40 forced-choice items with two response choices per items (e.g., A. I like "wild" uninhibited parties., or B. I prefer quiet parties with good conversation.). The SSS (Form V)

(Zuckerman, 1979) was developed by factor analysis of earlier versions of the SSS, which yielded four factors; Thrill and Adventure Seeking, Experience Seeking, Disinhibition, and Boredom Susceptibility. The Thrill and Adventure Seeking factor consists of items expressing a desire to participate in sports or activities involving some physical danger or risk, such as mountain climbing, parachute jumping, scuba diving, and high speed driving. The Experience Seeking factor consists of items expressing a desire to seek new experiences through the mind and senses by living in a nonconformist life style with unconventional friends and by travel. The Disinhibition factor consists of items expressing a need to engage in uninhibited behavior in social situations, such as excessive alcohol abuse at parties, inappropriately loud or aggressive, and seeking variety in sexual partners. The Boredom Susceptibility factor consists of items describing an aversion for repetitive experiences, routine work, or dull or predictable people as well as restlessness when things are unchanging. The SSS provides scores on the four factors, as well as a total sum.

Scores on the SSS have been found to correlate with drug abuse, particularly marijuana, hashish, amphetamine and psychedelic drugs (Brill, Crumpton, & Grayson, 1971; Carrol & Zuckerman, 1977; Kaestner, Rosen, & Appel, 1977), cigarette smoking (Stanaway & Watson, 1981), gambling (Zuckerman, 1974), sexual behavior and attitudes (Zuckerman,

Tushop, & Finner, 1976), skydiving (Hymbaugh & Garrett, 1974), scuba diving (Heyman & Rose, 1980), and volunteering for hypnosis and encounter groups (Stanton, 1976; Zuckerman, Schultz, & Hopkins, 1967). SSS scores have been found to be negatively correlated with age (Kish & Busse, 1968).

Test-retest reliability of the SSS using 65 males and females ranged from .70 on the Boredom Susceptibility scale to .94 on Thrill and Adventure Seeking and Total scales. When correlated with the Embedded Figures Test, Howard Mazes, and the Multiple Affect Adjective Check List it appears that the SSS measures sensitivity to internal sensations rather than impulsiveness. A positive relationship between SSS scores and field independence and a negative relationship with anxiety have been found, which is consistent with theories of sensation seeking (Zuckerman, 1979).

The Self-Report Delinquency Scale, developed by Elliott and Ageton (1980), was administered to all subjects to obtain information regarding the type and frequency of delinquent acts subjects engaged in over the last year. This measure consists of forty-seven items, which are a representative sample of the full range of delinquent acts, from "skipping classes without an excuse" to "attacked someone with the idea of seriously hurting or killing him or her." The drug use items include alcohol, marijuana, hallucinogens, amphetamines, barbituates, heroin, and cocaine. Respondents rated the frequency in which they were

involved in the delinquent act or used the drug in the last year by selecting one of eight categorical responses: 1. zero; 2. less than once a month; 3. once a month; 4. once every 2-3 weeks; 5. once a week; 6. 2-3 times a week; 7. once a day; 8. 2-3 times a day. This scale yields six subscales: predatory crimes against persons (e.g., sexual assault, aggravated assault, & robbery); predatory crimes against property (e.g., vandalism, burglary, auto theft, larceny, stealing, fraud & joyriding); illegal service crimes (e.g., prostitution, selling drugs, & buy/providing liquor for minors); public disorder crimes (e.g., carrying a concealed weapon, hitchhiking, disorderly conduct, drunkenness, making obscene phone calls); status crimes (e.g., runaway, sexual intercourse, alcohol use, & truancy); and hard drug use (e.g., amphetamines, barbituates, hallucinogens, heroin, & cocaine). The research using this measure has been found to be more consistent with official arrest records than studies using other self-reported delinquency measures addressing issues of race and class difference (Elliot & Ageton, 1980; Brownfield, 1986; Sampson, 1986).

Each subject completed the Trait Frustration Scale (Bergandi, Williams, & Lamb, 1982) which is an eight item Likert-type scale. The items are written in the first person and each describes a frustrating situation along with a response to that situation (e.g., If other people are beating me in a game, I inwardly accept it.). Responses to

the items are on an eight-point Likert scale ranging from 1 (almost never) to 8 (almost always). The scale provides three scores: Interpersonal score, Intrapersonal score and Total score. Half of the frustrating situations are individualized (e.g., Frustrating tasks make me feel aggressive), resulting in the intrapersonal score, and half are situations involving interpersonal competition (e.g., If other people are beating me in a game, I inwardly accept it.) yielding the interpersonal score. In a normative sample of 162 college students, it was found that subjects scoring high on this scale show greater aggression than lower scoring subjects following frustrating experiences and also greater relief following successful experiences (Bergandi, Williams, & Lamb, 1982) suggesting that this is a reasonably valid measure of frustration.

The Marlowe-Crown Social Desirability - Short Form 1(10) (MCSDS) (Strahan & Gerbasi, 1972) was completed by all subjects. This scale consists of ten items and yields a general social desirability score. Reliability coefficients for the 1(10) MCSDS range from .59 to .70 and correlations between the full MCSDS and the 1(10) short form range from .80 to .90.

Procedures

After receiving permission from school personnel, subjects were recruited from study halls, where they were given a brief description of the research and procedures used. The confidential nature of individual results was

emphasized to each subject. Consent forms and the Parent Questionnaire were sent home with each potential subject to be completed by the parent and returned to the experimenter prior to testing. Approximately 950 consent form/parent questionnaire packets were given to volunteers at four high schools in Alachua county.¹ There were 169 completed packets returned to the experimenter, resulting in a return rate of 18%. The subjects were tested individually and in groups of up to 8 subjects during their study periods. The subjects were instructed to read the directions at the top of each questionnaire and to request assistance if they did not understand a question. When the subjects completed the questionnaires they were given a free hamburger coupon and a list of referrals for drug abuse and psychological services available in the Alachua county area. Because the questionnaires were coded and the subjects' names were not directly associated with the codes, the list of psychological services was provided to all subjects in the event that they were experiencing emotional problems or abusing drugs and had responded so on the questionnaires.

¹High school students were be used for several reasons. The POS has been used for classifying elementary and high school students into the neurotic/disturbed, unsocialized-psychopathic, and socialized-subcultural groups (Raine & Venables, 1981; Raine, Roger, & Venables, 1982). Evidence that official delinquency records tend to underestimate delinquent behavior and that self-report measures reveal undetected offenses suggests that many students in the high schools participate in delinquent behavior (Quay, 1987). Research has also found that juveniles who have been arrested or convicted have a high likelihood of admitting

At two of the schools, the students' records were inspected by the experimenter to obtain their official grade point average, and school officials provided the number of disciplinary actions taken by the school in the last year for each subject. At the remaining two schools, school officials were given the subjects' names and they provided the official grade point averages and the number of disciplinary actions taken by the school in the last year for each subject.

Of the 169 subjects who completed the questionnaires, 17 did not report engaging in behavior which could have resulted in them being arrested and 12 were judged to be over-reporting delinquent behavior.² These 29 subjects were excluded from the analyses.

their offenses in a survey (Hardt & Peterson-Hardt, 1977; Hindelang, Hirschi, & Weiss, 1981) and only a small number (8 of 400) of unconvicted juveniles claimed to have been convicted (West & Farrington, 1977). It was assumed that subjects who engage in a minimal amount of delinquent behavior and who have similar attitudes as incarcerated delinquents, would also have less problematic, but similar behavior patterns and need for stimulation as juveniles not in the school setting due to their delinquent behavior.

²These subjects were deleted from the analysis on the basis of several findings. There was a marked break in the distribution of the frequency of total delinquent acts from 1088 to 1240. The individuals whose scores were above this break were then examined to evaluate for possible over-reporting. Each questionnaire was evaluated with the age and sex of the respondent in mind and pattern of overall responding. Examples of over-reporting include: having intercourse, cheating, stealing \$5-50, failing to return change, smoking marijuana, taking hallucinogens, damaging

The POS raw scores were used to classify subjects with regard to delinquent dimensions as in Genshaft (1980). POS raw scores were normalized and converted to T-scores. Subjects were classified on the basis of their highest T-score, which resulted in 54 subjects classified as neurotic-disturbed ($M = 57.1$, $SD = 7.7$), 42 as socialized-subcultural ($M = 57.4$, $SD = 9.4$), and 44 as unsocialized-psychopathic ($M = 56.0$, $SD = 12.5$). Duncan's Multiple Range tests revealed that each group scored significantly higher on that POS scale in which they were classified, than the other two scales in which they were not classified.

The Sensation Seeking Scale total scores were divided at the median to classify subjects as high and low sensation seekers. The 11 subjects whose score fell at the median were randomly placed in one of the two groups, which resulted in 76 low sensation seekers ($M = 14.8$, $SD = 4.5$) and 64 high sensation seekers ($M = 25.5$, $SD = 3.3$).

Combining the two classifications resulted in six groups, shown in Table 2-1.

Analysis

Multiple regression analyses were performed to evaluate the relationship between delinquent dimensions, sensation seeking, income, and sex, as well as possible interactions

school property, running away from home, hitting other students - 2 to 3 times per day; failing to return change, smoking marijuana, hitting students, lying about your age, being paid for sex, skipping class - daily.

Table 2-1. Delinquent Group by Sensation Seeking Group Frequencies.

	<u>Neurotic</u>	<u>Socialized</u>	<u>Psychopathic</u>	
<u>Sensation Seeking</u>				<u>Total</u>
High	22	15	27	64
<u>Low</u>	<u>32</u>	<u>27</u>	<u>17</u>	<u>76</u>
Total	54	42	44	140

among these variables in predicting type and frequency of self-reported delinquent behavior, frustration, grade point average and the number of disciplinary actions. Sex was included in the model due to the sensation seeking differences found between males and females (Zuckerman, 1979). Income level was also included in the model as research by Elliott and Ageton (1980) has found a significant relationship between SES and delinquent behavior. Age was treated as a control variable and entered into the regression model first. Again, the frequency and number of different crimes from the Self-Report Delinquency Questionnaire (Predatory Crimes against Property, Illegal Service Crimes, Public Disorder Crimes, and Status Crimes) were considered as dependent variables.

Separate analyses were accomplished for the three delinquent groups and the two sensation seeking groups. Although, these analyses would yield redundant findings as the regression analysis, the specific relationships among the different delinquent groups and between the high and low sensation seekers were further examined via these analyses. Here, several ANOVA's were conducted to assess the specific relationships among the delinquent groups for various dependent variables. T-tests were used to assess differences between the sensation seeking groups on various demographic and dependent variables. The categorical variables (sex, counseling, arrests, family income) were assessed by Chi-square tests.

CHAPTER 3 RESULTS

Inspection of the data revealed that several dependent measures departed substantially from normality. As a result a log transformation was performed on the following measures: frequency of predatory crimes against property, frequency of service crimes, frequency of public disorder crimes, total frequency of delinquent acts, number of different service crimes, total number of different delinquent acts and stressors.

Two subscales of the Self-Report Delinquency Questionnaire were scored categorically due to the limited number of subjects endorsing items on these subscales (hard drug use and predatory crimes against persons). Those who had committed predatory crimes against persons and those who used hard drugs were scored one on each scale, and if they had not committed any of these offenses they were scored a zero on the appropriate subscale.

The six delinquent by sensation seeking groups did not differ with regard to age, family income, parent's age or education, number of siblings, and number of persons in the home.

Self-Reported Delinquency

Examination of the self-report delinquency Questionnaire revealed that 90% of the subjects completing the questionnaires had engaged in some type of delinquent behavior. This finding is consistent with earlier research (Williams & Gold, 1972) with self-reported delinquent behavior.

The regression analysis revealed that the delinquent groups did not contribute significantly to the model in predicting any type of self-reported delinquent behavior. Even though delinquent group was not significant in the overall regression analysis the relation between self-report of delinquent behavior and delinquency groups was examined further (see Table 3-1). Here, it can be seen that the psychopathic group reported significantly more illegal service crimes than the other two groups. The psychopathic group also reported significantly more delinquent acts than the neurotic group, but neither group differed significantly from the socialized group.

Table 3-2 indicates that these differences among the delinquent groups may be primarily due to relative differences in the higher frequency categories (>55 for illegal service crimes and >250 for total delinquent acts). At the lower end of the frequency range for illegal service crimes, the ratio of neurotic to psychopathic is approximately 1:1, but at the higher frequency ranges, the

Table 3-1. Differences between the Three Delinquent Subtypes on measures of self-reported delinquency, sensation seeking and frustration.

	Neurotic N=54		Socialized N=45		Psychopathic N=53		Range ^a
	Mean	S.D.	Mean	S.D.	Mean	S.D.	
Age (years)	16.5	1.2	16.5	1.2	16.7	1.1	n.s.
Income*	4.7	1.1	4.5	1.4	5.0	1.2	n.s.
Number in Home	3.9	1.1	4.0	1.2	3.8	.9	n.s.
Illegal Service Crimes(number)	.7	.7	1.1	.9	1.3	1.2	<u>ND</u> <u>SD</u> PD
Total Number Delinquent Acts ^b	1.9	.9	2.1	.6	2.3	.7	<u>ND</u> <u>SD</u> PD
Official Grade Point Average	2.9	.6	2.2	.9	2.7	.6	<u>ND</u> <u>SD</u> <u>PD</u>
Official Disciplin.	.7	1.4	2.9	4.0	1.9	3.0	<u>ND</u> <u>PD</u> <u>SD</u>
Disinhibition Scale (SSS)	4.5	2.4	4.4	2.9	5.8	2.5	<u>ND</u> <u>SD</u> PD
Thrill and Adventure Seeking (SSS)	6.8	2.6	6.6	2.6	7.7	2.0	<u>ND</u> <u>SD</u> PD
Experience Seeking (SSS)	4.4	2.4	4.0	2.6	4.8	2.0	n.s.
Boredom Suscep. (SSS)	3.3	2.1	3.1	1.9	3.7	2.0	n.s.
SSS Total Score	19.0	6.7	18.0	7.3	22.0	5.4	<u>ND</u> <u>SD</u> PD
Intrapersonal Frustration Score	17.8	4.3	14.3	5.4	17.3	6.3	<u>ND</u> <u>SD</u> <u>PD</u>
Frustration Total Score	35.9	6.3	30.9	7.6	33.7	8.2	<u>ND</u> <u>PD</u> <u>SD</u>

*1 = < \$5,000; 2 = \$5,000 - 10,000; 3 = \$10,000 - 20,000

4 = \$20,000 - 30,000; 5 = \$30,000 - 50,000; 6 = >\$50,000

^aunderlined groups are not significantly different at $p < .05$; ^btransformed data.

Table 3-2. Percentage of Respondents Reporting Specific Levels of Delinquency by Delinquent Group.

Illegal Service Crimes			
Frequency	Neurotic	Socialized	Psychopathic
	%	%	%
1-14	77.8	64.3	61.4
15-29	11.1	21.4	11.4
30-54	3.7	4.8	11.4
55+	7.4	9.5	15.9

<u>Total Self-Reported Delinquency</u>			
Frequency	Neurotic	Socialized	Psychopathic
	%	%	%
1-49	31.5	19.0	22.7
50-99	24.1	26.2	18.2
100-249	24.1	28.6	22.7
250+	20.3	26.2	36.4

ratio is approximately 1:2. These differences are similar to those found by Elliott and Ageton (1982) with respect to race and class differences, with blacks and lower SES subjects over-represented in the high frequency categories.

The delinquent groups were not different with regard to the frequency and number of predatory crimes against property, public disorder crimes or status crimes.

T-tests revealed that high sensation seekers reported more delinquent acts on the subscales of the self-report delinquency questionnaire (as seen in Table 3-3). These findings are consistent with earlier findings of Farley and Farley (1972), that high sensation seeking scores are associated with more delinquent behavior. However, these findings go beyond earlier studies, showing that high sensation seekers also participate in a greater number and a wide range of delinquent behavior.

Regression analysis suggested that sensation seeking and a delinquent group by sex interaction effect significantly predicted the frequency of self-reported delinquent acts, and this model accounted for 36% of the variance (see Table 3-4). However, only sensation seeking significantly predicted the number of different self-reported delinquent acts and this model accounted for 39% of the variance. Contrary to my initial hypothesis, regression analyses revealed no significant interactions between delinquent group and sensation seeking group membership (see Table 3-4).

Table 3-3. Demographic and Various Dependent Measures for the Two Sensation Seeking Groups.

	Low SS N=79		High SS N=64		p
	Mean	S.D.	Mean	S.D.	
Age (years)	16.6	1.3	16.6	1.2	n.s.
Income ^a	4.6	1.3	4.9	1.1	n.s.
Number in Home	4.0	1.1	3.8	1.0	n.s.
Predatory Crimes Property (number)	1.6	2.1	4.0	3.4	.0001
Illegal Service Crimes (number) ^b	.6	.7	1.5	1.0	.0001
Public Disorder Crimes (number)	1.8	1.5	3.2	1.6	.0001
Status Crimes (number)	2.5	1.1	3.2	1.2	.0002
Total Number Delinquent Acts ^b	1.8	.6	2.4	.6	.0001
Official GPA	2.6	.9	2.6	.7	n.s.
Official Disciplinary Actions	1.6	2.8	2.0	3.3	n.s.
Frustration Scale Total	33.1	7.5	34.4	7.7	n.s.
% males	33		50		.05*
% arrested	1		14		.01*
% with prior counseling	34		60		.005*
% who play school sports	37		55		.05*

^a1 = < \$5,000; 2 = \$5,000 - 10,000; 3 = \$10,000 - 20,000

4 = \$20,000 - 30,000; 5 = \$30,000 - 50,000; 6 = >\$50,000

^btransformed data; * χ^2

Table 3-4. Summary of Findings from the Regression Analysis Using Delinquent Group, Sensation Seeking, Sex, and Income in Predicting Self-Reported Delinquency.

Variable	Significant Variables in Regression Model	p*	R ² **
Total Delinquent Acts			
Frequency	Sensation Seeking Delinquent x Sex	.0002 .04	.36
Number	Sensation Seeking	.0001	.39
Predatory Crimes/Property			
Frequency	Sensation Seeking Sex	.09 .003	.33
Number	Sensation Seeking Sex	.02 .0009	.36
Illegal Service Crimes			
Frequency	Sensation Seeking Delinquent Delinquent x Sex	.004 .05 .05	.37
Number	Sensation Seeking	.0009	.33
Public Disorder Crimes			
Frequency	Sensation Seeking Sex	.0004 .06	.33
Number	Sensation Seeking	.0009	.34
Status Crimes			
Frequency	Sensation Seeking Delinquent x Sex	.0003 .02	.38
Number	Sensation Seeking	.0001	.28
Total Frustration Score	Delinquent	.02	.29
Official GPA	Delinquent Group Income Level	.003 .04	.32
Official Disciplinary Actions	Delinquent Sex DelinquentxSSSxSex	.04 .07 .05	.30

*Variable significance level; **overall model R².

Regression analysis suggested a significant delinquent group by sex interaction for the frequency of status crimes, illegal service crimes and the total frequency of delinquent acts. For these three variables, males in the Psychopathic group consistently endorsed more items.

Figure 3-1 displays the relation between delinquent group, sex, and the frequency of status crimes. Female neurotic and socialized groups reported more status crimes than males in their respective groups, but this pattern reverses with the psychopathic group. The delinquent group by sex interaction for illegal service crimes is presented in Figure 3-2. The pattern for illegal service crimes is very similar to that found with status crimes, but with the neurotic group displaying a more extreme difference as a function of sex. The total frequency of delinquent acts by delinquent group and sex is plotted in Figure 3-3. Here, it is evident that both sexes in the neurotic and socialized groups are essentially equal in total delinquent acts, but the psychopathic group demonstrated a markedly different pattern with males higher than females. These findings support earlier research concerning psychopathic males, but suggest that psychopathic females may be very different from the hypothesized psychopathic group, at least in terms of delinquent behavior.

Chi-square analysis suggested a significant association between sex and both the frequency and the number of predatory crimes against property and the frequency of

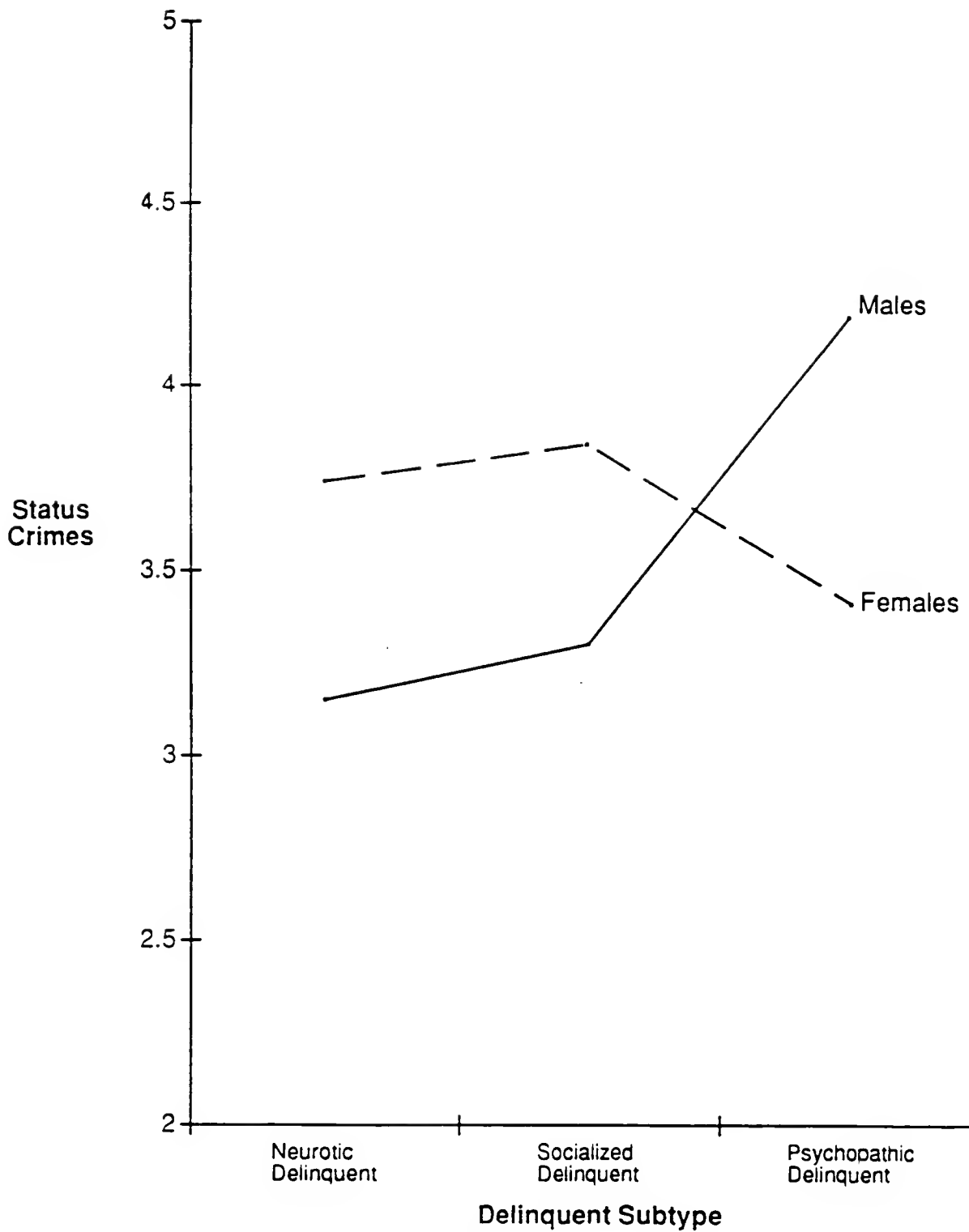


Figure 3-1. Frequency of Status Crimes as a Function of Delinquent Group and Sex.

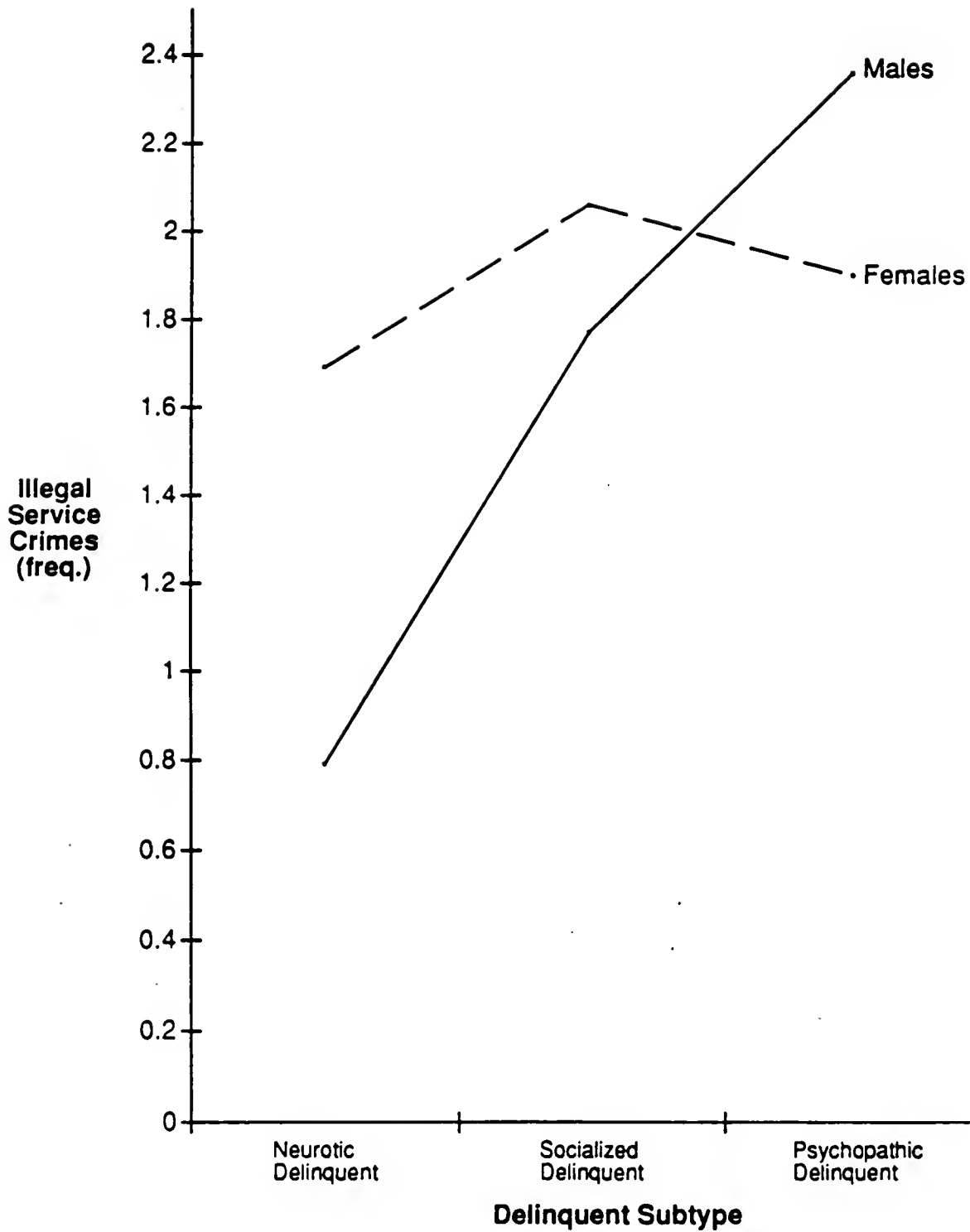


Figure 3-2. Frequency of Illegal Service Crimes as a Function of Delinquent Group and Sex.

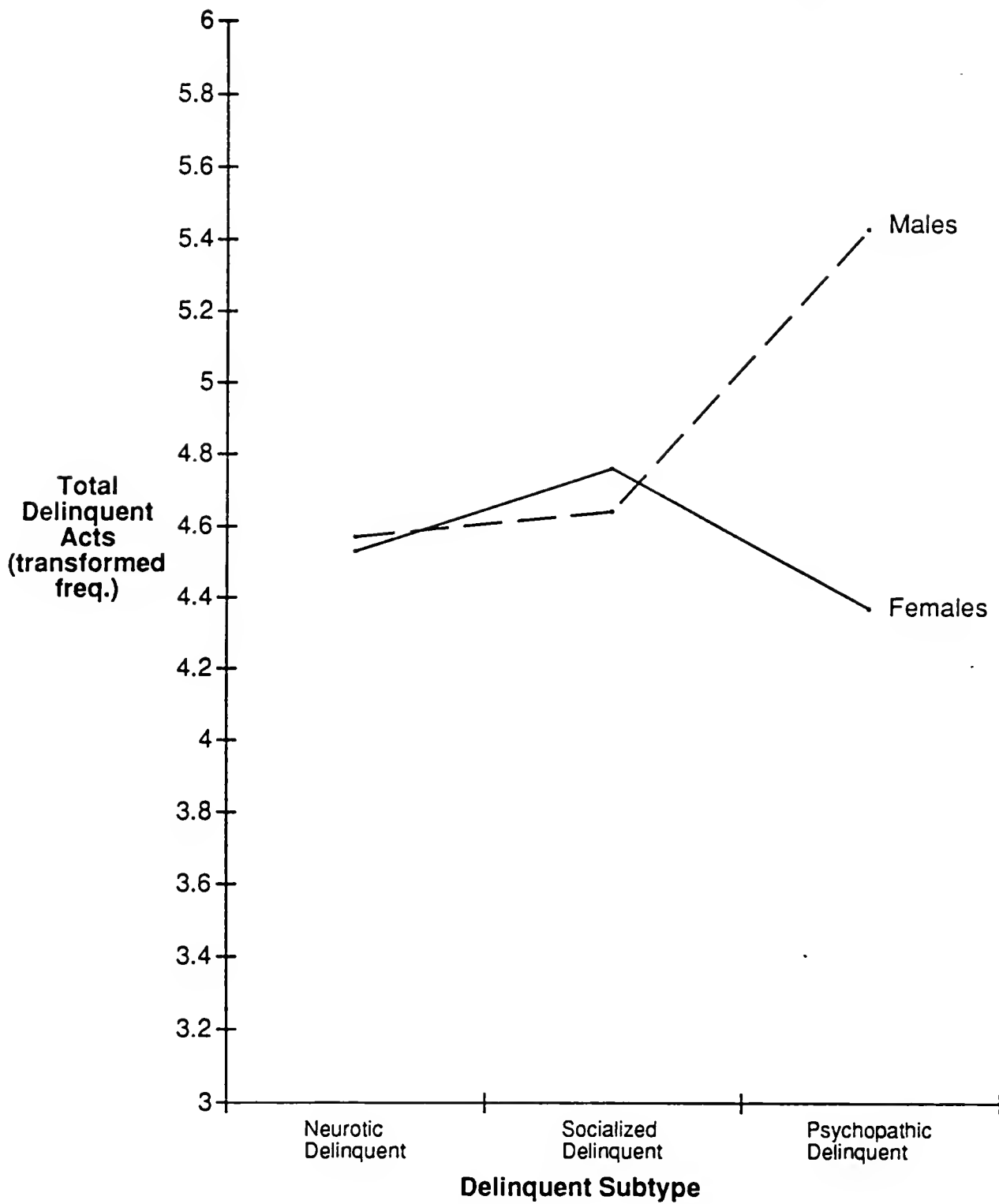


Figure 3-3. Frequency of Total Delinquent Acts as a Function of Delinquent Group and Sex.

public disorder crimes, with males reporting more crimes than females. This is consistent with previous self-report surveys (Elliott et al., 1983) and surveys of official records (Visser & Roth, 1986).

The six delinquent by sensation seeking groups were different in their use of hard drugs with all three high sensation seeking groups having more drug users (17) than the low sensation seekers (3) ($\chi^2(5, N = 140) = 17.04, p < .005$). This supports previous research regarding more drug usage among high sensation seekers than low sensation seekers (Brill, Crumpton, & Grayson, 1971; Carrol & Zuckerman, 1977; Kaestner, Rosen, & Appel, 1977).

The six groups did not differ in terms of predatory crimes against persons. This is in contrast to earlier findings of Ellis (1982), who found that psychopathic delinquents exhibited more aggression toward persons than the neurotic or socialized delinquents.

Delinquency and Sensation Seeking

Psychopathic delinquents were significantly higher than the other two groups on the Thrill and Adventure Seeking scale, Disinhibition scale and the Total score of the Sensation Seeking Scale (see Table 3-1). These findings are consistent with earlier findings concerning psychopathic delinquents and sensation seeking (Whitehill, Demeyer-Gapin, & Scott, 1976). There were no significant differences

among the groups on the Experience Seeking or the Boredom Susceptibility subscales of the Sensation Seeking Scale.

The two sensation seeking groups were significantly different with regard to sex, with more females in the low sensation seeking group, and an even number of males and females in the high sensation seeking group (see Table 3-3). There were no significant differences on any of the scales of the Sensation Seeking Scale (Form V) between a sample of undergraduates and the subjects in this sample (Zuckerman, 1979).

Frustration

Overall, this sample scored significantly below a sample of college undergraduates ($n=162$) on the total score of the Frustration Scale ($t(300) = 2.73, p < .005$) (Bergandi, Williams, & Lamb, 1982). The socialized and psychopathic groups scored significantly below the sample of undergraduates (socialized: $t(300) = 6.14, p < .001$; psychopathic: $t(300) = 2.66, p < .005$) (Bergandi, Williams, & Lamb, 1982). The neurotic group scored no differently from college undergraduates on the total Frustration score.

As seen in Table 3-1, the socialized group had lower total frustration scores than the neurotic group, neither of which were different from the psychopathic group. Additionally, the socialized group scored significantly below the other two groups on the intrapersonal subscale of the Frustration Scale. There were no significant differences between the sensation seeking groups on any of

the frustration measures. The regression analyses confirmed the above findings, with delinquent group being the only significant variable in the model predicting total frustration. The regression model was not significant in predicting scores on the intrapersonal and interpersonal subscales of the Frustration Scale.

Academic, Problem Behavior, and Extracurricular Activities

The relation between delinquent group and grade point average was examined using an analysis of variance followed by Duncan's multiple range test. These results are presented in Figure 3-4. Here it can be seen that the grade point average for the socialized delinquent group was significantly lower than that for either the neurotic group or the psychopathic group. This finding was unexpected given that Jurkovic and Prentice (1977) found that neurotic and socialized scores on the POS were unrelated to intelligence, but psychopathic scores were negatively related to intelligence and achievement. It remains unclear if this lower grade point average for the socialized group is sample specific or possibility that differences in academic achievement may not be a stable characteristic of the different delinquent groups.

The relation between the delinquency group and the frequency of official disciplinary actions was examined

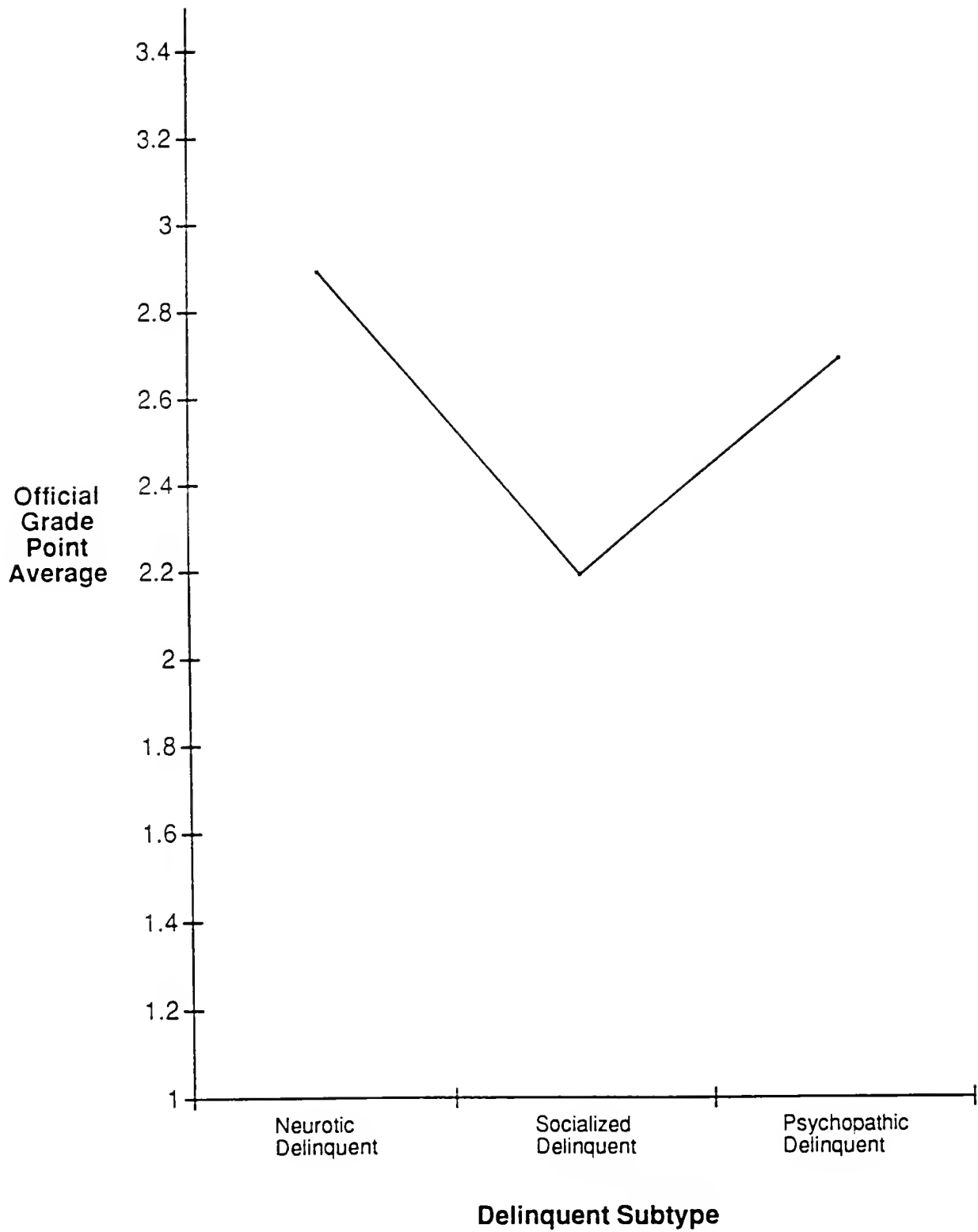


Figure 3-4. Official Grade Point Average as a Function of Delinquent Group.

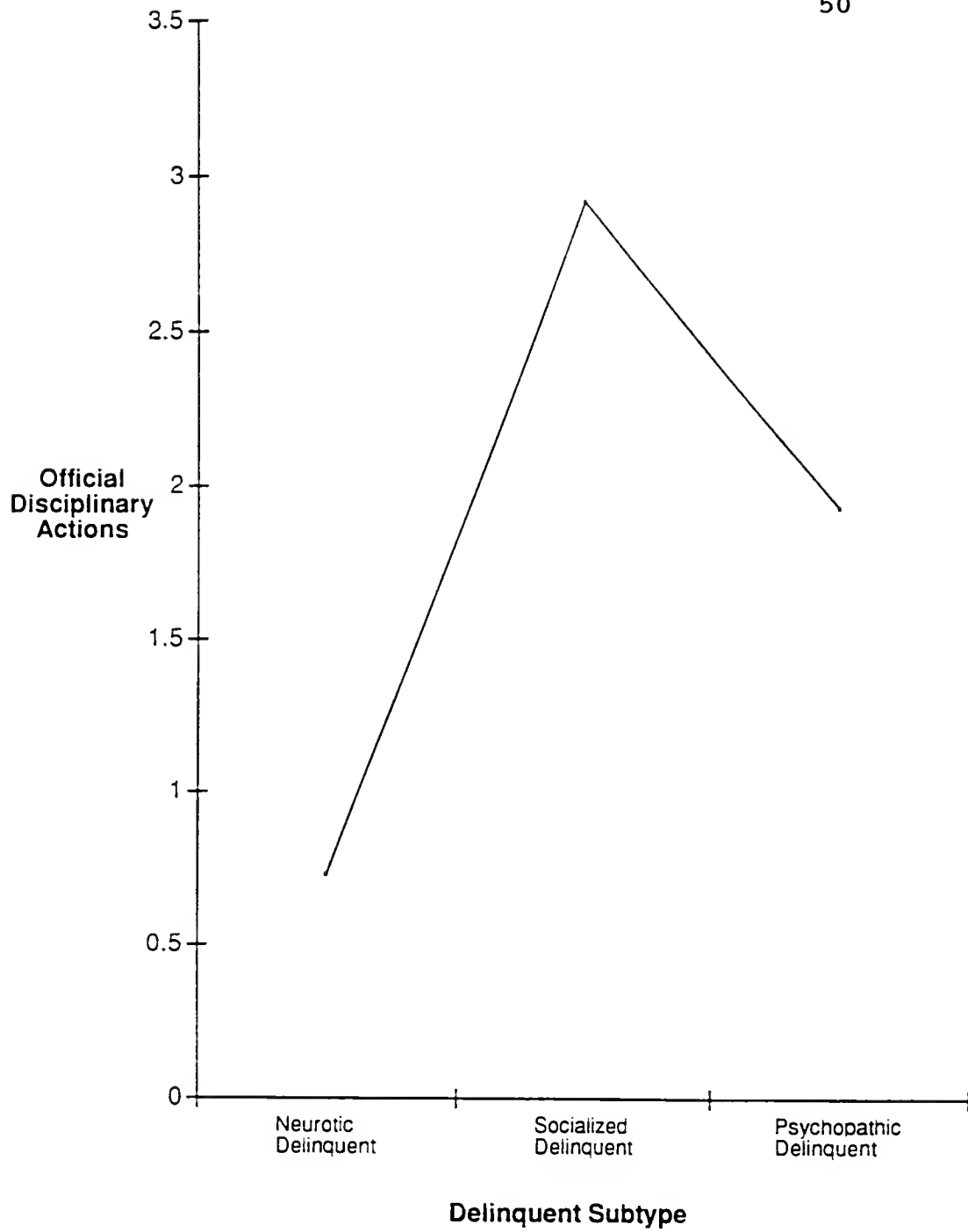
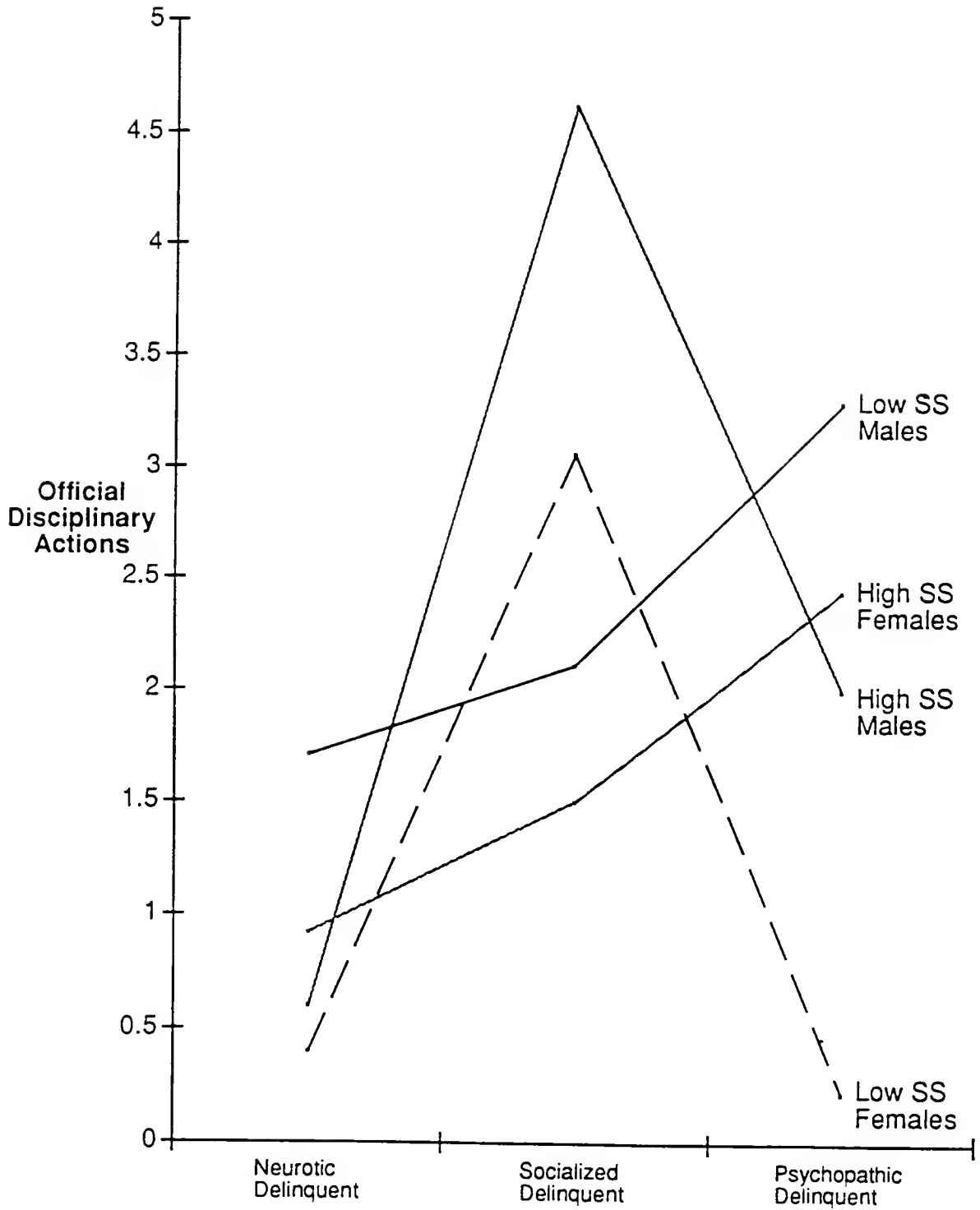


Figure 3-5. Official Disciplinary Actions as a Function of Delinquent Group.

using an ANOVA, followed by a Duncan's Multiple Range Test. These results are presented in Figure 3-5. The neurotic group did not differ from the psychopathic group, and the socialized group had significantly more disciplinary actions than the neurotic group, but not significantly more than the psychopathic group. This was unexpected given the differences found with delinquent behavior (i.e. psychopaths engaging in more illegal service crimes). There were no significant differences between high and low sensation seekers on official disciplinary actions.

A regression analysis indicated a significant three way interaction of sensation seeking group x delinquent group x sex in predicting official disciplinary actions. This interaction is presented in Figure 3-6. High sensation seeking socialized delinquent males received significantly more official disciplinary actions than any of the other groups. Low sensation seeking males had a higher, but similar pattern of disciplinary actions to high sensation seeking females. Also, high sensation seeking males had a higher, but similar pattern to low sensation seeking females. This data, along with data previously presented, suggest a complex relationship between delinquent group and sex.

Of the ten subjects arrested, 6 were in the high sensation seeking socialized delinquent group, 3 were in the high sensation seeking psychopathic delinquent group, and 1 in the low sensation seeking socialized delinquent group.



Delinquent Subtype
Figure 3-6. Official Disciplinary Actions as a Function of Delinquent Group, Sensation Seeking Group and Sex.

There was no difference among the six groups with regard to prior counseling/psychotherapy experience.

Overall, the high sensation seeking subjects reported more arrests, counseling experience and participation in school sports.

Subjects in the six groups demonstrated a wide range of academic and sports interests, though no significant differences in the frequency of these variables between the groups was found. Clearly, the most popular classes were English, history, and science, and these were distributed rather evenly across groups. Chi-square analysis of the percentage of subjects within each group who played some sport at school suggested no significant differences. The most popular sports were football and basketball with these distributed approximately evenly across groups.

Correlations

Pearson product-moment correlations were computed in an attempt to further examine the strength of the relationships between self-reported delinquent behavior and delinquent personality dimensions, sensation seeking, GPA, and frustration scores. These correlations are presented in Table 3-5. Here it can be noted that the psychopathic scale of the Personal Opinion Survey correlated significantly with the predatory crimes against property, public disorder crimes, and the total delinquent acts scales of the Self-

Table 3-5. Pearson Correlations for Self-report Delinquency Questionnaire subscales (transformed freq.) and various measures (N=140).

	Predatory Crimes Property	Illegal Service Crimes	Public Disorder Crimes	Status Crimes	Total Delinquent Acts
PD (POS)	.35**	.23	.37**	.27	.43**
SD (POS)	.27	.21	.27	.27	.30*
ND (POS)	.13	-.04	.06	.05	.11
TAS (SSS)	.26	.18	.22	.14	.22
ES (SSS)	.05	.35**	.27	.20	.29*
DIS (SSS)	.34**	.55**	.54**	.55**	.59**
BS (SSS)	.23**	.22**	.32**	.25	.33**
Total (SSS)	.32**	.47**	.49**	.42**	.52**
Age (yrs) ^a	-.05	.24	.13	.28*	.21
Frustration Total	.30*	.13	.17	.12	.19
Official GPA ^b	.04	-.05	-.19	-.18	-.16

* $p < .05$. ** $p < .01$. ^a $n=137$. ^b $n=135$. Bonferroni
Correction (M = 55).

report Delinquency Questionnaire. The socialized scale correlated significantly with the total delinquent acts, while the neurotic scale had no significant correlations. Additionally, the Disinhibition Scale and the Total score of the Sensation Seeking Scale have significantly greater correlations with the delinquent subscales than the other subscales of the Sensation Seeking Scales. These findings are consistent with earlier findings regarding the relation between delinquent behavior and sensation seeking (Farley & Farley, 1976) and the Disinhibition subscale of the Sensation Seeking Scale (White, Labouvie, & Bates, 1985). The correlations between specific delinquent behavior and sensation seeking scores has never been reported.

It was also found that the raw scores of the psychopathic scale of the Personal Opinion Survey correlated with the Disinhibition Scale $r(140) = .26, \text{ n.s.}$, the Boredom Susceptibility $r(140) = .36, p < .01$, and the total score of the Sensation Seeking Scale $r(140) = .24, \text{ n.s.}$ There were no other significant correlations between the neurotic and socialized scales of the POS and the Sensation Seeking Scale subscales. These findings support and extend earlier findings by Jefferson and Johnson (1989) concerning the relationship between the psychopathic scale of the Personal Opinion Survey and the Sensation Seeking Survey scores. The strength of the relationship between the total frustration score and predatory crimes against property was consistent with the earlier predictions.

The correlation for the raw scores on the psychopathic scale of the Personal Opinion Survey and the official grade point average was $r(135) = -.27$, n.s., which yields a trend in the direction as found in earlier studies concerning psychopathic delinquents and intelligence (Jurkovic and Prentice, 1977). The correlation for the raw scores on the socialized scale of the Personal Opinion Survey and the official grade point average was $r(135) = -.50$, $p < .01$.

CHAPTER 4 DISCUSSION

The present findings are consistent with earlier research on self-reported delinquent behavior in that approximately 90% of the subjects reported behavior which could have resulted in their arrest (Williams & Gold, 1972; Elliott, Huizinga, & Ageton, 1985). Although these behaviors may have been as benign as loitering or skipping school, most subjects had various types of behavior which would be classified as delinquent. This high percentage of adolescents engaging in delinquent behavior highlights the need for more research in this area.

A surprising finding was the limited number of differences among the delinquent personality dimensions in terms of self-reported delinquent behavior. There may be several reasons for this finding. One, differences in delinquent behavior among the groups may be confounded with sample bias. For instance, members of the psychopathic group may have been less extreme members of this group and thus engaged in less delinquent behavior. It may also be due to one group of delinquents under-reporting delinquent behavior, i.e. the neurotic group. It may also be due to the method of classification, with statistical differences

on the scales of the POS not corresponding to differences in delinquent personalities.

The relation between delinquent group and sex has received very limited attention in the delinquency literature. Yet, this interaction was significant in predicting the frequency of illegal service crimes, status crimes, and total delinquent acts, with female neurotic and socialized subjects more likely to engage in these types of crimes than the male neurotic and socialized subjects. However, the male psychopathic subject is likely to engage in more crimes of these types, as well as more total delinquent acts than males or females in the other two groups. Given the theorized traits of the psychopathic dimension, it is not surprising that psychopathic males would report more delinquent activity. Their manipulative, amoral, rebellious and impulsive nature makes them more likely to engage in delinquent behavior. The finding that males reported more predatory crimes against property and public disorder crimes is not surprising given the propensity of adolescent males to engage in such behaviors in response to peer pressure or to impress others. The sex difference may also be due to the males having a higher number of opportunities to engage in this type of behavior or possibly to the females' ties to males who have an inhibiting effect on their behavior. These findings suggest that even within the delinquent dimensions, sex differences

need to be considered in order to fully understand the delinquent adolescent.

Sensation seeking was found to be a major factor in accounting for self-reported delinquent behavior. Such a strong relationship between sensation seeking and self-reported delinquent behavior was somewhat surprising, given the sparse attention sensation seeking has received in the delinquent literature. As part of a juvenile's personality, sensation seeking may be a primary motivator for behavior in general, given the finding that many subjects who engaged in delinquent behavior also participated in extracurricular activities at school. For example, among the 20 subjects with the highest frequency of delinquent behavior, 12 or 60% engaged in organized sports (either at school or away from school).

In terms of sensation seeking scores, the results from this study are consistent with theorizing concerning the relation between the psychopathic delinquent group and sensation seeking. The psychopathic group scored higher on the Sensation Seeking Scale, especially on the Disinhibition Scale, than the other two groups. These findings support earlier research portraying psychopathic delinquents as sensation seekers, even though most researchers failed to differentiate this group from other delinquent personality groups. It is unclear if this is the component of the psychopathic dimension that drives the individual to engage

in delinquent behavior or if it is a general motivator for behavior.

This study extends the laboratory research with delinquents and behavior problem children, suggesting that it is the psychopathic group which accounts for a large part of the sensation seeking tendencies within the delinquent population. In fact of all of the psychopathic delinquents, 61% were high sensation seekers. This is in contrast to the pattern in the other two groups, with high sensation seekers comprising 36% of the neurotic group, and 41% of the socialized groups.

The results of this study provide no support for the hypothesis that the delinquent dimensions and sensation seeking groups would interact to result in more crime. This may be due to several factors. The aspect of the psychopathic personality that may motivate the juvenile to participate in delinquent behavior may be largely accounted for by sensation seeking. The relationship between delinquent behavior and delinquent personality dimensions may also be affected by the large effect of sex, with females having a different pattern of delinquent behavior than males. The lack of an interaction may also be due to the method of recruiting subjects, with the students with strong psychopathic and sensation seeking tendencies not volunteering to participate.

When all the variables measured were included in the model, sensation seeking was consistently the single best

predictor of the frequency and number of predatory crimes against property, illegal service crimes, public disorder crimes, status crimes, and total delinquent acts. These findings support earlier findings that those who engage in delinquent behavior tend to score higher on sensation seeking measures. This study extends those findings to adolescents who engage in all types delinquent behavior but are not incarcerated.

Frustration did not appear to play the role among the delinquent groups as was hypothesized. The higher scores for the psychopathic and neurotic groups may affect these groups in two very different ways. The psychopathic group may be more inclined to act out or engage in delinquent behavior due to their frustration, where as the neurotic group may be inclined to internalize their frustration and suffer the emotional consequences. The socialized group's lower level of frustration, when compared to the other two groups, may be the result of less concern with academic matters, and more concern with their social circle. Their peer group may produce stress, but also provides various ways to cope with stress that may lessen the frustration related to being an adolescent. It may be difficult dealing with the stressors related to adolescence, but it may be less difficult with a good social network.

The pattern for disciplinary actions was markedly different from the pattern for self-reported delinquent behavior among the delinquent groups. The relatively high

level of disciplinary actions for the socialized group may be a function of the peer group the subjects associate with or the socialized group's tendency to engage in behavior that will result in being caught (i.e. tardiness, being disruptive in class). This may also be due to the tendency for the socialized group members to be easily influenced by peer pressure.

In terms of achievement, the results of this study conflict with results from previous studies using the same delinquent personality dimensions. In earlier studies, subjects in the psychopathic group were found to score lower on measures of intelligence and achievement than the other groups (Jurkovic & Prentice, 1977; Jefferson & Johnson, 1989). However, no such relationship was found with this sample. Indeed the socialized group had a significantly lower GPA than the other two groups. This sample of socialized subjects may not have academic performance as a high priority in their peer group. With more emphasis on looking good, having the right friends, or concentrating on non-academic activities, this group may be less concerned with their class requirements. These findings suggest that the intellectual/achievement data related to the delinquent personality dimensions may be sample specific and not a major differentiating factor among the groups.

This study is not without methodological compromise. For instance, this study primarily used self-report measures and these types of measures have been criticized for their

questionable reliability and validity. However, the reliability and validity of the questionnaires used in this study demonstrated acceptable construct validity and test-retest reliability, with the exception of the Frustration Scale, which had no available reliability data. Likewise, these measures are susceptible to response bias. In many research situations it is essential to control for the subjects' need to present themselves in the best possible light. However, the personality dimensions measured in this study may contain various amounts of social desirability. Any attempt to control for this presumed confound may in fact be removing some aspect from the analysis which is a valid part of the dimension being assessed.

In an attempt to assess a possible response bias, Pearson product-moment correlation coefficients were calculated for the subjects' self-report of grade point average and disciplinary actions taken at school in the last year and official (from school records) grade point average and disciplinary actions. The correlations of self-report and official information were significant (grade point average: $r(122) = .77, p < .0001$; disciplinary actions: $r(122) = .71, p < .0001$). When the effect of social desirability, as measured by the Marlowe-Crown Social Desirability Scale, was removed (via partial correlations), the correlations were slightly higher, though not significantly so (grade point average: $r(99) = .80, p < .0001$; disciplinary actions: $r(111) = .74, p < .0001$).

These findings suggest that the subjects are reliably reporting information that is highly susceptible to response bias. The possible effects of social desirability were assessed by examining differences among the delinquent groups and between the sensation seeking groups on social desirability, as well as including it in a multiple regression analysis. There were no significant differences among the delinquent groups nor between the sensation seeking groups on the social desirability measure. The inclusion of social desirability in the multiple regression analysis had no effect on the significant findings.

This study used high school students reporting delinquent behavior as opposed to adjudicated delinquents. Some may argue that using non-incarcerated adolescents as subjects would provide a limited amount of useful information in understanding delinquent behavior. However, consistent with our findings, research has found that approximately 90% of adolescents report engaging in delinquent behavior (Williams & Gold, 1972) and that juveniles reliably report their offenses (Hardt & Peterson-Hardt, 1977; Hindelang, Hirschi & Weiss, 1981). The use of high school students reporting delinquent behavior provided information about a less pathological sample of delinquents, not typically considered in delinquent research and this somewhat underutilized population in delinquent research provided some unique information about the delinquent personality.

The results from this study may have implications in several areas of the delinquent literature. The relationship between sensation seeking and delinquent behavior in this sample was greater than has typically been found. The strong association between sensation seeking and different delinquent behaviors suggests that a more thorough understanding of this relationship may provide some answers concerning the motivations behind individuals engaging in delinquent behavior and may provide insights into possible interventions for delinquent juveniles. Whether this relationship between sensation seeking and delinquent behavior is consistent from high school students' reporting delinquent behavior to institutionalized delinquents, needs further examination.

The present findings provide several topics for future research. No study has examined the pattern of delinquent behavior among the delinquent dimensions with adjudicated delinquents. Also, no prior research has examined the percentage of each delinquent dimension that participates in the different frequencies of delinquent behavior (as seen in Table 3-2). Future research should examine if there is consistency across the delinquent dimensions for self-reported delinquents and adjudicated delinquents in their pattern of delinquent behavior (e.g., whether psychopathic delinquents engage in more illegal service crimes).

There is another concern in terms of delinquent personality dimensions and sex. Quay and Parson (1971)

failed to differentiate between males and females in the data reported on the development of the Personal Opinion Survey. In fact, when there was an association between delinquent behavior and delinquent group, gender was also involved. As can be seen in Figure 3-6, the pattern of differences between the delinquent groups is markedly different between males and females. These differences highlight the need for further research into these different patterns of delinquent behavior for males and females and whether the personality traits afforded to the socialized, psychopathic and neurotic delinquents are consistent for both sexes.

If replicated, this study suggests possible directions for interventions and preventative actions that could be taken to help decrease the probability of adolescents engaging in delinquent behavior. Given the strong relationship between sensation seeking and delinquent behavior, changes in the classroom designed to maintain the students' attention longer and increase their participation in the learning process would seem likely to be useful. Classroom changes may include: modification of course presentation by using more visual aids and more stimulating demonstrations of concepts, computer aided teaching, shorter lectures versus typical one hour lectures, and smaller student to teacher ratios. The availability of more extracurricular activities, such as intraschool teams competing against each other, which would facilitate

participation of a larger number of students and occupy their time that may have been spent in delinquent activity.

The data from this study highlight the need for more research into the delinquent personality. These findings provide a glimpse at the motivations behind delinquent behavior and the need for more specificity in delinquent research. More precision in research, in terms of delinquent behavior and delinquent personalities, would lead to a more thorough understanding of the delinquent individual and hopefully lead to successful treatment and early identification for those juveniles at risk for engaging in delinquent behavior.

Appendix A
QUESTIONNAIRES

Interest and Preference Test

Directions: Each of the items below contains two choices, A and B. Please circle the choices that most describes your likes or the way you feel. In some cases you may find items in which both choices describe your likes or feelings. Please choose the one which better describes your likes or feelings. In some cases you may find items in which you do not like either choice, in these cases mark the choice you dislike the least. Do not leave any items blank.

It is important that you respond to all items with only one choice. We are interested only in your likes or feelings, not in how others feel about these things or how one is supposed to feel. There are no right or wrong answers as in other kinds of tests. Give an honest opinion of yourself.

1. A. I like "wild" uninhibited parties.
B. I prefer quiet parties with good conversation.
2. A. There are some movies I enjoy seeing a second or even a third time.
B. I can't stand watching a movie that I've seen before.
3. A. I often wish I could be a mountain climber.
B. I can't understand people who risk their necks climbing mountains.
4. A. I dislike all body odors.
B. I like some of the earthy body smells.
5. A. I get bored seeing the same old faces.
B. I like the comfortable familiarity of everyday friends.
6. A. I like to explore a strange city or section of town by myself, even if it means getting lost.
B. I prefer a guide when I am in a place I don't know well.
7. A. I dislike people who do or say things just to shock or upset people.
B. When you can predict almost everything a person will say or do he or she must be a bore.
8. A. I usually don't enjoy a movie or play where I can predict what will happen in advance.
B. I don't mind watching a movie or play where I can predict what will happen in advance.
9. A. I have tried marijuana or would like to.
B. I would never smoke marijuana.

10. A. I would not like to try any drug which might produce strange and dangerous effects on me.
B. I would like to try some of the drugs that produce hallucinations.
11. A. A sensible person avoids activities that are dangerous.
B. I sometimes like to do things that are a little frightening.
12. A. I dislike "swingers."
B. I enjoy the company of real "swingers."
13. A. I find that stimulants make me uncomfortable.
B. I often like to get high (drinking liquor or smoking pot).
14. A. I like to try new foods that I have never tasted before.
B. I order the dishes with which I am familiar, so as to avoid disappointment and unpleasantness.
15. A. I enjoy looking at home movies or travel slides.
B. Looking at someone's home movies or travel slides bores me tremendously.
16. A. I would like to take up the sport of water-skiing.
B. I would not like to take up water-skiing.
17. A. I would like to try surf-board riding.
B. I would not like to try surf-board riding.
18. A. I would like to take off on a trip with no pre-planned or definite routes, or timetable.
B. When I go on a trip I like to plan my route and timetable fairly carefully.
19. A. I prefer the "down-to-earth" kinds of people as friends.
B. I would like to make friends in some of the "far-out" groups like artists and "hippies."
20. A. I would not like to learn to fly an airplane.
B. I would like to learn to fly an airplane.
21. A. I prefer the surface of the water to the depths.
B. I would like to go scuba diving.
22. A. I would like to meet some persons who are homosexual (men or women).
B. I stay away from anyone I suspect of being "queer."
23. A. I would like to try parachute jumping.

- B. I would never want to try jumping out of a plane with or without a parachute.
24. A. I prefer friends who are excitingly unpredictable.
B. I prefer friends who are reliable and predictable.
25. A. I am not interested in experiences for its own sake.
B. I like to have new and exciting experiences and sensations even if they are a little frightening, unconventional or illegal.
26. A. The essence of good art is in its clarity, symmetry of form and harmony of colors.
B. I often find beauty in the "clashing" colors and irregular forms of modern paintings.
27. A. I enjoy spending time in the familiar surroundings of home.
B. I get very restless if I have to stay around home for any length of time.
28. A. I like to dive off the high dive.
B. I don't like the feeling I get standing on the high board (or I don't go near it at all).
29. A. I like to date members of the opposite sex who are physically exciting.
B. I like to date members of the opposite sex who share my values.
30. A. Heavy drinking usually ruins a party because some people get loud and boisterous.
B. Keeping the drinks full is the key to a good party.
31. A. The worst social sin is to be rude.
B. The worst social sin is to be a bore.
32. A. A person should have considerable sexual experience before marriage.
B. It's better if two married persons begin their sexual experience with each other.
33. A. Even if I had the money I would not care to associate with flighty persons like those in the "jet set."
B. I could conceive of myself seeking pleasure around the world with the "jet set."
34. A. I like people who are sharp and witty even if they do sometimes insult others.
B. I dislike people who have their fun at the expense of hurting the feelings of others.
35. A. There is altogether too much portrayal of sex in movies.

- B. I enjoy watching many of the "sexy" scenes in movies.
36. A. I feel best after taking a couple of drinks.
B. Something is wrong with people who need liquor to feel good.
37. A. People should dress according to some standard of taste, neatness, and style.
B. People should dress in individual ways even if the effects are sometimes strange.
38. A. Sailing long distances in small crafts is foolhardy.
B. I would like to sail a long distance in a small but seaworthy sailing craft.
39. A. I have no patience with dull or boring persons.
B. I find something interesting in almost every person I talk with.
40. A. Skiing fast down a high mountain slope is a good way to end up on crutches.
B. I think I would enjoy the sensations of skiing very fast down a high mountain slope.

Delinquency Questionnaire

PUT A CHECK IN THE APPROPRIATE BOX

HOW MANY TIMES IN THE LAST YEAR HAVE YOU:

less							
than	1		1	2-3	1	2-3	
	1	X every	X	X	X	X	X
	a	a	2-3	a	a	a	a
0	nth	nth	wks	wk	wk	day	day

1. purposely damaged or destroyed property belonging to your parents or other family members.
2. purposely damaged or destroyed property belonging to a school.
3. purposely damaged or destroyed other property that did not belong to you (not counting family or school property).
4. stolen (or tried to steal) a motor vehicle, such as a car or motorcycle.
5. stolen (or tried to steal) something worth more than \$50.
6. knowingly bought, sold or held stolen goods (or tried to do any of these things).
7. thrown objects (such as rocks, snowballs, or bottles) at cars or people.
8. run away from home.
9. lied about your age to gain entrance or to purchase something; for example lying about your age to buy liquor or get into a movie.
10. carried a hidden weapon other than a plain pocket knife.
11. stolen (tried to steal) things worth \$5 or less.

PUT A CHECK IN THE APPROPRIATE BOX
HOW MANY TIMES IN THE LAST YEAR HAVE YOU:

less						
than	1		1	2-3	1	2-3
	1	X every	X	X	X	X
	a	a	2-3	a	a	a
	0 mth	mth	wks	wk	wk	day

12. attacked someone with the idea of seriously hurting or killing him/her.
13. been paid for having sexual relations with someone.
14. had sexual intercourse with a person of the opposite sex.
15. been involved in gang fights.
16. sold marijuana or hashish. ("pot," "grass," "hash").
17. cheated on school tests.
18. hitchhiked where it is illegal to do so.
19. stolen money or other things from your parents or other member of your family.
20. hit (or threatened to hit) a teacher or other adult at school.
21. hit (or threatened to hit) one of your parents.
22. hit (or threatened to hit) other students.
23. been loud, rowdy, or unruly in a public place (disorderly conduct).
24. sold hard drugs, such as heroin, cocaine, and LSD.
25. taken a vehicle for a ride (drive) without the owner's permission.

PUT A CHECK IN THE APPROPRIATE BOX
HOW MANY TIMES IN THE LAST YEAR HAVE YOU:

less						
than	1		1	2-3	1	2-3
	1	X every	X	X	X	X
	a	a 2-3	a	a	a	a
	0 mth	mth	wks	wk	wk	day

26. bought or provided liquor for
a minor.

27. had (or tried to have) sexual
relations with someone
against their will.

28. used force (strong-arm
methods) to get money or
things from other students.

29. used force (strong-arm
methods) to get money or
things from a teacher or other
adult at school.

30. used force (strong-arm
methods) to get money or
things from other people
(not students or teachers).

31. avoided paying for such
things as movies, bus or
subway rides, and food.

32. been drunk in a public
place.

33. stolen (or tried to steal)
things worth between \$5 and
\$50.

34. stolen (or tried to steal)
something at school.

35. broken into a building or
vehicle (or tried to break in)
to steal something or just
look around.

36. begged for money or things
from strangers.

37. skipped classes without an
excuse.

PUT A CHECK IN THE APPROPRIATE BOX
HOW MANY TIMES IN THE LAST YEAR HAVE YOU:

less							
than	1		1	2-3	1	2-3	
	1	X every	X	X	X	X	X
	a	a	2-3	a	a	a	a
	0 mth	mth	wks	wk	wk	day	day

38. failed to return extra
change that a cashier gave
you by mistake.

39. been suspended from school.

40. made obscene telephone calls,
such as calling someone and
saying dirty things.

HOW OFTEN IN THE LAST YEAR
HAVE YOU USED:

41. alcoholic beverages (beer,
wine and hard liquor).

42. marijuana - hashish
("grass," "pot," "hash").

43. hallucinogens ("LSD,
"mescaline," "peyote,"
"acid")

44. amphetamines ("uppers,"
"speed," "whites").

45. barbituates ("downers,"
"reds," "ludes").

46. heroin ("horse," "smack").

47. cocaine ("coke").

Personal Opinion Survey

1. The best teachers are the ones who are very easy.
2. I would be a happier person if I could satisfy all my parent's wishes.
3. Sometimes I wonder if I'll ever grow up.
4. My folks usually blame bad company for the trouble I get into.
5. In this world you're a fool if you trust other people.
6. Before I do something, I try to consider how my friends will react to it.
7. We ought to pay our elected officials better than we do.
8. I never used to steal little things from the neighborhood stores.
9. My teachers have given me lower grades than I deserve just because they think I am a trouble-maker.
10. I don't worry about the future; there's nothing much I can do about it anyway.
11. I often say mean things to other people and then feel sorry for it afterwards.
12. When I think I am right nobody can change my mind.
13. I don't mind hurting people who get in my way.
14. Most people are squares.
15. I am always hurting the people I love the most.
16. I am so touchy on some subjects that I can't talk about them.
17. You have to get the other guy before he gets you.
18. Most boys stay in school because the law says they have to.
19. Policemen are friendly and try to help you.
20. You have to admire somebody who has enough guts to talk back to a cop.
21. One day I will get even with everybody who has done me dirty.
22. I have never seen a policeman yet who cared about anyone but himself.
23. I feel tired a good deal of the time.
24. People seem to like me at first, but I have trouble keeping friends.
25. When a group of boys get together they are bound to get in trouble sooner or later.
26. You gotta fight to get what's coming to you.
27. I never wish that I were dead.
28. Only a fool would spend his life working a 40 hour week.
29. I never worry about a thing.
30. It seems as if people are always telling me what to do, or how to do things.
31. I do what I want to do, whether anybody likes it or not.
32. At times I have a strong urge to do something harmful or shocking.
33. I think people like me as much as they do other people.
34. Even when things go right for a while I know it won't last.

35. I can easily "shake it off" when I do something I know is wrong.
36. I never have the habit of shaking my head, neck, or shoulder.
37. A person is better off if he doesn't trust anyone.
38. The best way to get ahead in the world is to be tough.
39. It is very important to have enough friends and social life.
40. All this talk about honesty and justice is a lot of nonsense.
41. There is something wrong with a person who can't take orders without getting angry or resentful.
42. I am doing as much or as well as my parents expect me to.
43. When I see people laughing I often think they are laughing at me.
44. The only way to settle anything is to lick the guy.
45. It's dumb to trust older people.
46. I just can't stop doing things that I am sorry for later.
47. For all the things I have done I should have been punished more than I have.
48. I usually feel well and strong.
49. I sometimes feel that no one loves me.
50. When I was going to school I played hooky quite often.
51. My future looks bright.
52. I find it hard to "drop" or "break with" a friend.
53. Sometimes I think I won't live very long.
54. It doesn't matter what you do as long as you get your kicks.
55. I wish I had not been such a disappointment to my family.
56. The most important thing is to win no matter how.
57. Everyone should be required to finish high school.
58. I owe my family nothing.
59. My feelings are never hurt so badly I cry.
60. The only way to make big money is to steal it.
61. In school I was sometimes sent to the principal for cutting up.
62. I have never been in trouble with the law.
63. The worst thing a person can do is to get caught.
64. I don't think I'm quite as happy as others seem to be.
65. I sometimes wish I'd never been born.
66. A guy's only protection is his friends.
67. A person who steals from the rich isn't really a thief.
68. I have had a real fight.
69. My way of doing things is apt to be misunderstood by others.
70. If you're clever enough, you can steal anything and get away with it.
71. The average policeman is not strict enough about the law.
72. The only way to get what you want is to take it.

73. I must admit I find it very hard to work under strict rules and regulations.
74. Success in this world is a matter of luck.
75. I often get nervous I have to get up and move around to calm myself down.
76. Nobody has ever called me "chicken" and gotten by with it.
77. I just don't seem to get the breaks other people do.
78. I get so angry that I "see red".
79. It's hard to get others to like me.
80. I don't really care what happens to me.
81. No matter how hard I try I always get caught.
82. My eyes often pain me.
83. Women are only good for what you can get out of them.
84. My life pretty boring and dull most of the time.
85. I have been expelled from school or nearly expelled.
86. The only way to make out is to be tough.
87. It is harder for me to just sit still and relax.
88. Once you've been in trouble, you haven't got a chance.
89. Hitting someone makes me feel good inside.
90. Being successful usually means having your name in the paper.
91. Even when things go right I know it won't last.
92. I'd like to start a new life somewhere else.
93. If you don't have enough to live on, it's OK to steal.
94. It is important to think about what you do.
95. I can outwit almost anyone.
96. On my report card I usually get some failure marks.
97. I feel that I have often been punished without cause.
98. Whenever I do something I shouldn't, it worries me.
99. It's alright to steal from the rich because they don't need it.
100. Sometimes I have stolen things I really didn't need.

Answer Sheet

Name: _____ Date of Birth: _____

CIRCLE T (TRUE) OR F (FALSE) FOR EACH QUESTION.

- | | | | |
|---------|---------|---------|----------|
| 1. T F | 26. T F | 51. T F | 76. T F |
| 2. T F | 27. T F | 52. T F | 77. T F |
| 3. T F | 28. T F | 53. T F | 78. T F |
| 4. T F | 29. T F | 54. T F | 79. T F |
| 5. T F | 30. T F | 55. T F | 80. T F |
| 6. T F | 31. T F | 56. T F | 81. T F |
| 7. T F | 32. T F | 57. T F | 82. T F |
| 8. T F | 33. T F | 58. T F | 83. T F |
| 9. T F | 34. T F | 59. T F | 84. T F |
| 10. T F | 35. T F | 60. T F | 85. T F |
| 11. T F | 36. T F | 61. T F | 86. T F |
| 12. T F | 37. T F | 62. T F | 87. T F |
| 13. T F | 38. T F | 63. T F | 88. T F |
| 14. T F | 39. T F | 64. T F | 89. T F |
| 15. T F | 40. T F | 65. T F | 90. T F |
| 16. T F | 41. T F | 66. T F | 91. T F |
| 17. T F | 42. T F | 67. T F | 92. T F |
| 18. T F | 43. T F | 68. T F | 93. T F |
| 19. T F | 44. T F | 69. T F | 94. T F |
| 20. T F | 45. T F | 70. T F | 95. T F |
| 21. T F | 46. T F | 71. T F | 96. T F |
| 22. T F | 47. T F | 72. T F | 97. T F |
| 23. T F | 48. T F | 73. T F | 98. T F |
| 24. T F | 49. T F | 74. T F | 99. T F |
| 25. T F | 50. T F | 75. T F | 100. T F |

Frustration Scale

PLEASE CIRCLE THE MOST APPROPRIATE RESPONSE

- | | ALMOST
NEVER | 1 | 2 | 3 | 4 | 5 | 6 | ALMOST
ALWAYS | 7 | 8 |
|--|-----------------|---|---|---|---|---|---|------------------|---|---|
| 1. If other people are beating me in a game, I inwardly accept it. | | | | | | | | | | |
| 2. When I work at a task, and things keep going wrong, as a result I feel as if I <u>could</u> smack someone, somebody, or myself. | | 1 | 2 | 3 | 4 | 5 | 6 | | 7 | 8 |
| 3. When a problem seems very difficult, I try that much harder and work that much harder to solve it. | | 1 | 2 | 3 | 4 | 5 | 6 | | 7 | 8 |
| 4. If I am losing while playing my favorite sport, I get frustrated. | | 1 | 2 | 3 | 4 | 5 | 6 | | 7 | 8 |
| 5. When I'm involved in a competitive activity, I am able to remain inwardly calm. | | 1 | 2 | 3 | 4 | 5 | 6 | | 7 | 8 |
| 6. Frustrating tasks make me feel aggressive. | | 1 | 2 | 3 | 4 | 5 | 6 | | 7 | 8 |
| 7. Even if unsuccessful, I enjoy the challenge of a difficult task. | | 1 | 2 | 3 | 4 | 5 | 6 | | 7 | 8 |
| 8. When I lose out in competing with somebody else, (ie. a job, in school, cheerleader, etc.) I become moody. | | 1 | 2 | 3 | 4 | 5 | 6 | | 7 | 8 |

Social Desirability Scale

PLEASE CIRCLE TRUE (T) OR FALSE (F) TO EACH QUESTION.

- T F 1. I'm always willing to admit it when I make a mistake.
- T F 2. I like to gossip at times.
- T F 3. I always try to practice what I preach.
- T F 4. I never resent being asked to return a favor.
- T F 5. There have been occasions when I took advantage of someone.
- T F 6. I sometimes try to get even rather than forgive and forget.
- T F 7. I have never been irked when people expressed ideas very different from my own.
- T F 8. At times I have really insisted on having things my own way.
- T F 9. There have been times when I felt like smashing things.
- T F 10. I have never deliberately said something that hurt someone's feelings.

Parent Questionnaire

Relation to Child: Father ____ Mother ____ Step-Father ____

Step-Mother ____ Foster Parent ____

Phone Number: _____

Date of Birth: _____ Spouses Date of Birth: _____

Spouses Relation to Child: Father ____ Mother ____

Step-Father ____ Step-Mother ____

Foster Parent ____

Number of other siblings: __ Total number in the household: __

Your Occupation: _____

Spouse's Occupation: _____

Education: __ High School __ H.S. Graduate __ College

__ College Graduate __ Post Graduate

Spouse's Education: __ High School __ H.S. Graduate

__ College

__ College Graduate __ Post Graduate

Family income level: __ <\$5,000 __ \$5,000-10,000

__ \$10,000-20,000 __ \$20,000-30,000

__ \$30,000-50,000 __ >\$50,000

Activities you participate in with the child: _____

Has your child ever been diagnosed as hyperactive? Yes __ No __

Has your child ever taken medication for hyperactivity? Yes __

No __

Student Questionnaire

Date of Birth: _____ Today's Date _____

Grade: _____ Grade Point Average: _____

Number of times in the last year you have been disciplined at school (sent to office, put in detention, suspended, expelled): _____

Favorite Class: _____ Favorite Sport: _____

Sports played at school: _____

Organized Sports played away from school: _____

Hobbies: _____

Have you ever been arrested: Yes__ No__

If so, what for? _____

Have any of your brothers/sisters ever been arrested? Yes__
No__

Have you ever talked to a counselor or psychologist about something that was upsetting you? Yes __ No __

If so, what prompted you to talk to someone? _____

Where does most of your stress come from: __ home__ school
__ friends __ other

Appendix B
RAW DATA

Variable List: subject number, age, school(1-PK Yonge, 2-Gainesville HS, 3-Buchholz HS, 4-Newberry HS), POS-SD, POS-ND, POS-PD, SSS-TAS, SSS-ES, SSS-DIS, SSS-BS, SSS-Total, sex, Frustration-Interpersonal, Frustration-Intrapersonal, Frustration-Total, SRDQ- frequency of pred. crimes against persons, SRDQ-frequency of pred. crimes against property, SRDQ-frequency of illegal service crimes, SRDQ-frequency of status crimes, SRDQ-hard drug use, SRDQ-frequency total, SRDQ-number of different pred. crimes against persons, SRDQ-number of different pred. crimes against property, SRDQ-number of different illegal service crimes, SRDQ- number of different public disorder crimes, SRDQ-number of different status crimes, SRDQ-number of different hard drugs used, SRDQ-total number of different offenses, social desirability score, self-reported GPA, official GPA, self-reported disciplinary actions, official disciplinary actions, number of arrests, had siblings been arrested (0-no, 1-yes), prior counseling or psychotherapy (0-no, 1-yes), origin of stress (1-home, 2-school, 3-friends, 4-others), mother age, father age, number of siblings, total number in the household, father education (1-HS, 2-HS grad., 3-college, 4-college grad, 5- post grad.), mother education, income (1-<5000, 2-5-10,000, 3-10-20,000, 4-20-30,000, 5-30-50,000, 6->50,000), ever diagnosed hyperactive(0-no, 1-yes), ever had medication for hyperactivity(0-no, 1-yes), race, do they come from a single parent home (0-no, 1-yes), delinquent group (1-SD, 2-ND, 3-PD), overall group number (1-low SS SD, 2-Low SS ND, 3-low SS PD, 4-high SS SD, 5-high SS ND, 6-high SS PD), sensation seeking group (1-low, 2-high), participate in school sports (0-no, 1-yes), participate in other organized sports (0-no, 1-yes), grade.

Raw data:

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825 1 6 2 4 5 1 19 5 2.0 2.1 7.5 9 0 0 1 1 47 57 4 5 3 3 6 0
0 1 0 2 5 2 0 1 12
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188 1 7 2 6 4 0 20 1 . 3.2 0 1 0 0 1 1 36 34 2 5 2 4 4 1 0 1
0 1 4 2 0 0 9
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2 3 1 3 2 0 11 0 2.5 3.0 0 0 0 0 0 2 41 45 2 5 5 3 5 0 0 1 0
1 1 1 0 0 9
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650 1943 2 14 2 9 5 5 38 3 2.0 2.2 5 7 1 0 1 2 37 39 1 4 3 3
4 0 0 1 0 3 6 2 1 0 10
007 17.5 1 5 9 9 10 7 6 3 26 2 21 15 36 0 5 0 10 32 0 47
0 1 0 2 2 0 5 6 4.0 3.6 0 0 0 0 1 2 38 38 1 3 4 5 6 0 0 2 0
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2 5 2 1 1 12
011 16.5 1 6 12 13 9 10 4 4 27 1 13 15 28 0 15 77 140 168 12
412 0 3 3 3 4 1 14 9 3.8 3.6 1 4 0 0 0 1 38 39 1 4 4 4 5 0 0
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3 1 0 0 11
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3 3 1 1 1 10
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1 1 1 0 1 12
084 18.1 3 8 12 4 7 4 3 7 21 2 14 16 30 0 0 5 0 64 0 69
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4 2 1 1 12
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730 1 4 2 4 4 0 15 3 3.2 2.8 2 1 0 0 1 1 39 40 0 3 5 5 6 0 0
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1 4 2 0 0 12
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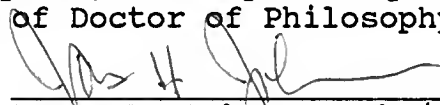
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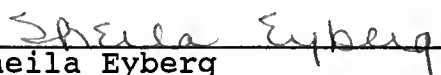
Biographical Sketch

I was born and raised in Rustburg Virginia by two caring parents, along with an older brother and sister. Upon completing high school, I attended Virginia Tech in Blacksburg, Virginia. In August of 1980 I married Julianna M. Raasch. In 1981, I received a Bachelor of Science degree in psychology with a minor in biology. I then attended Hollins College and received a Master of Arts degree in psychology in 1983. In June of 1982, I began working for the Mental Health Services of the Roanoke Valley as a crisis intervention counselor in the Emergency Outreach Services. In January of 1984, I became the coordinator of Emergency Outreach Services, supervising 7 counselors. In May of 1985 our first child, Andrew Ryan, was born. In August of 1985, I resigned for Mental Health Services and moved to Gainesville, Florida, to attend the University of Florida in clinical psychology, pursuing a Ph.D. While at the University of Florida I became involved in research into delinquency, sensation seeking and male sexual dysfunctions. In August of 1988 I moved my family to Washington D.C. to begin an internship in clinical psychology with the United States Air Force at Malcolm Grow Medical Center.

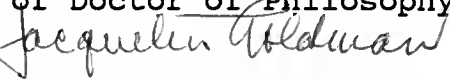
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James H. Johnson, Chair
Professor of Clinical and
Health Psychology

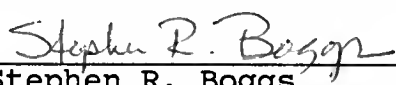
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Sheila Eyberg
Professor of Clinical and
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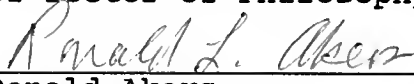
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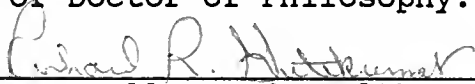

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Assistant Professor of
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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Ronald Akers
Professor of Sociology

This dissertation was submitted to the Graduate Faculty of the College of Health Related Professions and to the Graduate School and was accepted as partial fulfillment on the requirements for the degree of Doctor of Philosophy.

August 1989



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